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GRACIOUS DISCOVERIES: TOWARD AN
UNDERSTANDING OF JONATHAN
EDWARDS' PSYCHOLOGICAL THEORY,
AND AN ASSESSMENT OF HIS PLACE IN
THE HISTORY OF AMERICAN
PSYCHOLOGY

JAMES GEORGE BLIGHT

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GRACIOUS DISCOVERIES: TOWARD AN UNDERSTANDING
OF JONATHAN EDWARDS' PSYCHOLOGICAL THEORY,
AND AN ASSESSMENT OF HIS PLACE IN THE
HISTORY OF AMERICAN PSYCHOLOGY

by

JAMES G. BLIGHT

A.B., University of Michigan, 1970

M.A., University of New Hampshire, 1973

A THESIS

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In Partial Fulfillment of
The Requirements for the Degree of

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August, 1974

This thesis has been examined and approved.

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July 24, 1974
Date

ACKNOWLEDGEMENTS

Many years ago Dorothy Parker summarized the dilemma of most writers. "I hate to write," she said, "but I love to have written." For me writing is a mostly tedious, lonely, exasperating endeavor, replete with false starts, dead-ends and illogical middles. Writing history, in essence, is mind-to-data combat with the inherent absurdity of infinite information: a tale of more or less successful attempts to impose a coherent, compelling, and appealing scheme onto some small aspect of the record of human experience.

Writing itself is hardly a labor of love; it is labor, period. It can bring into full bloom some of an individual's most perverse characteristics. In my case, and my closest associates and family members will fully concur with this, the writing of this dissertation has helped transform me from a part-time to near full-time grump, preoccupied star-gazer, insecure neurotic, insomniac, and cat-kicker. It can lead to a kind of perpetual trance-like state in which involvement with the outer world is viewed as a nuisance. More than a few times my wife and children interrupted my train of thought by inquiring why I was writing a note in my spaghetti sauce, or why I was squeezing my bubble gum and chewing my silly putty. My characteristic response, equally mystifying I am sure, was "Jonathan Edwards, mumble mumble."

I was immersed in a consuming intellectual passion, and I would not return from the conceptual never-land until it was done with me, or I with it. It is now done and it is indeed a joy "to have written"; to have harrassed the past with some contemporary concepts; to have tied some diverse ideas together in a tenuous but common perspective.

It seems kind of ridiculous to say "thank you" in print to the many people who have helped me complete this dissertation. Some of them won't even read these words. Those who do read them need not be reminded of the enormity of the following ratio:

$$\frac{\text{Time spent helping Jim Blight}}{\text{Time spent by Jim Blight writing "thank you"}}$$

I view the following "acknowledgements," therefore, simply as a humbling reminder to myself of my indebtedness to others.

Many individuals have provided a receptive audience for my half-baked historical notions and interests. Al Raphelson, of the University of Michigan, helped to convince a struggling young undergraduate that the history of psychology might just provide a suitable outlet for his diverse interests. He was right. Alan Heimert of Harvard, Julian Jaynes of Princeton, and David Lyttle of Syracuse University read the prospectus for this project and provided me with a stimulating blend of encouragement and raised eyebrows. Thomas Shafer of McCormick Theological Seminary not only read the prospectus but offered detailed advice concerning where to look in Edwards for pertinent information and about the

general pitfalls of doing research on Edwards. He advised me that for my broad and unorthodox purposes, it would be best to concentrate on Edwards' published works, as he knew of nothing in Edwards' voluminous, unpublished notebooks which is inconsistent with the psychological doctrine presented in the published works. Randy Easton, Dick High, George Selement, and Ron Shor, all of the University of New Hampshire, have responded to my ear-bending tactics with nothing but bemused patience and stimulating criticism.

The dictionary defines "rough" as "not refined, crude, not carefully or thoroughly worked out." This is an accurate description of the state of my rough draft which was read in its entirety by one of the hardiest groups of pioneers in all academia: Charles Clark, Rand Evans, George Haslerud, Darrett B. Rutman, and Robert I. Watson, all of the University of New Hampshire, and Orlo Strunk of Boston University. For the split infinitives, illogical absurdities, and other smudges which remain in this dissertation, they are blameless. They smoothed it out as best they could.

Professor Robert I. Watson has guided this project from its inception. Well, almost. Actually he has guided me as I guided it. At the beginning of our relationship of professor to graduate student, he rightfully regarded me with suspicion--as an unruly renegade who had unfortunately wandered into his ken. "What on earth," I can imagine him asking his delightful wife Hazel, "am I going to do with that guy?" It is my good fortune that he endured me; he patiently

let me work out my problem on my own, mostly, while offering incisive but supportive criticism whenever I asked for it. He is a remarkable man. Without him, the history of psychology would still be little more than a half-cocked hobby, and this small contribution to it simply would not exist.

Stephanie Ackerman typed the final version of the dissertation. Efficiency is rare these days and so is a good sense of humor. Steph has both of these in abundance. Could it be that, as Prof. Watson's secretary she honed these traits to a fine edge as a simple survival tactic? An apocryphal story may provide a clue. For a number of years Prof. Watson has been at work producing two definitive, bibliographic volumes: one of primary and the other of secondary references on the five hundred or so most eminent deceased psychologists, from Descartes to the present. Each of the many thousands of references has been individually typed by Steph on a separate 3 x 5 index card, many of them in languages which are either extinct, or should be. Day after day the verified references would be brought in by myself and a host of others, checked by Prof. Watson and given to Steph for typing. One day an associate of mine gleefully unloaded a pile of the sinister cards on Steph's desk, she looked up at him with jaundiced, rectangular eyes (the 3 x 5 effect) and said "come here, I want to show you something." She lifted from her desk drawer a glass box, exactly 3"x 5", filled, she said, with over five hundred of her broken finger nails. During her subsequent summer vacation, she told him, she was going to distribute one

nail on the grave of each of the dead eminences. Sometimes I wonder how she commemorated the typing of this dissertation.

A half-hearted "thank you" is in order to the leaders of the Arab oil-producing nations. They created an energy crisis which caused the University of New Hampshire to close for a couple of months, during which time I completed writing the first draft free from teaching responsibilities. Shalom!

Two summer fellowships from the University of New Hampshire provided me with some extra time to read and write and also to de-fog my brain when the reading and writing was completed.

Finally, there is Peggy. I will simply say that no one, not even Jonathan Edwards, ever made a discovery as gracious as I did the day I met that woman. Viva la Big Peg!

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ABSTRACT

GRACIOUS DISCOVERIES: TOWARD AN UNDERSTANDING OF JONATHAN EDWARDS' PSYCHOLOGICAL THEORY, AND AN ASSESSMENT OF HIS PLACE IN THE HISTORY OF AMERICAN PSYCHOLOGY

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Historians who have dealt with the psychological thought of the colonial period, and with Edwards in particular, fall into two general categories. On the one hand there are the historians of the discipline of psychology who, following Edwin G. Boring, have deined the history of psychology as that stream of historical thought which proceeded toward, through, and beyond Wilhelm Wundt, the first "experimental" psychologist. The other group of historians who have considered Edwards and colonial psychology, however, define the history of psychology not as an ideational journey through Wundt, but as the record of man's thoughts concerning human nature. Since Edwards and his colleagues had much to say about man's nature, this approach at least allows a good deal of colonial thought to enter the history of psychology as an

object of serious thought. Yet this study, serious though it has been, has also been remarkably barren. "Human nature" is just too broad and unwieldy a term. What are the dimensions of man's nature?

The "Prescriptions" of Robert I. Watson and the "Fundamental Issues" of Michael Wertheimer are adopted as useful criteria regarding the dimensions of human nature. They are used principally to elaborate the profound paradoxes and complexities in Edwards' psychological theory. Edwards held that man is (a) a rational-emotive unity, and (b) both proactive and reactive. It is demonstrated that this Synthetic viewpoint implies that man is somehow both free and determined, rational and irrational, and he possesses a host of other combinations of attributes which are usually held to be polar opposites. Until recently, whenever the synthetic view has been advocated, as it has by Augustine, Edwards, and the American functionalists, the question of how such a complex man might function has been left unanswered. The synthetic theorists have lacked a model of the mind which can accommodate all the diverse characteristics which they attribute to it. Recently, however, cognitive theorists have constructed such a model, information processing, which holds to the rational-emotive and proactive-reactive principles of Edwards.

In spite of a number of obvious differences, Edwards and many information-processing theorists have asked the same basic psychological questions and given answers which

differ only in clarity. What, they have asked, is the nature of man's relationship with the environment? The unified, rational-emotive nature of the mind is described by Neisser, a leading information-processing theorist, as "multiple processing." All purposeful, goal-directed, conscious activity, it is held, is actually an elaboration of unconscious, emotionally-laden information. Information-processing theory represents man's relationship to the world as a cybernetic feedback loop--the TOTE unit. Once a person is moved to act by a sense of incongruity, he is said to Iest-Operate-Iest-Exit from the loop.

Human activity as automatic and mundane as getting out of bed and as difficult and complex as composing a poem can be neatly described with information-processing concepts and terminology. Proactive planning, selecting and execution is interspersed with reactive reception of needed insights from somewhere on the fringes of the stream of thought. These creative discoveries, great and small, are the product of both activity and inactivity and of a unified rational-emotive process.

The information-processing model is then applied to Edwards. In Edwards' view, the cognitive jaunt through the conversion loop consists mostly in two vigorous and tortuous periods of planning, scheming, and evaluating surrounding a restful, reactive oasis in which God "discovers" Himself to the convert. First, the scriptures are read and sermons are heard; the individual perceives that he is in need, and he

attempts to move sequentially and methodically toward his goal of salvation. The actual "discovery" of grace, however, requires more than conviction, more than a conscious effort to seek God. After the period of "reasoning," of fretting and planning to seek the light, the weary seeker must lay his plan aside and cease to seek. He receives the light; the Lord shouts, as it were, and he listens. It is then that the Spirit, the "vital indwelling principle," is fused to the mind of the convert.

After traversing these stages, the concerned seeker quite naturally wishes to know whether his experience has been a genuine conversion or merely a work of the devil. He reverts to what Edwards called "reasons," or sequential, goal-directed thought as he attempts to evaluate the validity of what he hopes has been a valid conversion. For a variety of reasons, however, Edwards believed that no conversion, not even his own, could be evaluated with any degree of confidence, though he did describe the saintly life of the converted person with great clarity.

Finally, an effort is made to briefly trace the fate of Edwards' psychology through James. It is contended that his doctrine of a unified, rational-emotive mind was gradually but decisively overthrown by a coalition of American and European positions. His proactive-reactive position, however, was clarified and elaborated, and it provided James, Dewey, and the other "functionalists" with an American precedent for their "new" psychology.

CHAPTER I

INTRODUCTION

"Time," Emerson wrote, "dissipates to shining ether the solid angularity of facts." One of the principal functions of historical scholarship is, I believe, to restore some semblance of "angularity" to the past. In intellectual history this means that we must sharpen our conception of what was said, but more importantly, we must interpret as best we can what was meant. Often, what was said appears either irrelevant or absolutely inscrutable, or perhaps both. This is especially true in the history of psychology where the timeless issues have, until recently, been embedded in other contexts: philosophical, religious, political, and medical. Discussion of these issues is polluted with surplus and obscure meanings which help identify their historical context, but which also make it difficult to see valid historical relationships.

The application of a contemporary model to historical data, as has been increasingly done with psychoanalysis, is a promising method of focusing the past so that we, in the present, can find intelligible meaning in it. Yet in practice, much "psychohistory" is simply bad history and worse psychoanalysis. The vagary and uncertainty of historical data is often compounded with a nebulous neo-Freudian model

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and a lot of catchy, idiosyncratic jargon. While most historians still reject the conscious application of models onto history, many of those who endorse "psychohistory" often find psychological terms distasteful. For example, in an article entitled "The Use and Abuse of Psychology in History," Frank Manuel has stated that he finds psychological jargon "too ugly" for direct application to history.¹ He favors a more subtle use of psychological concepts. His Portrait of Isaac Newton is a typical product of the prudent imposition of the psychoanalytic model onto history.² Prudence, however, normally an admirable trait, has in this area led to confusion over the meaning and appropriateness of psychoanalytic terms, and a certain suspicion that the model, however it might be defined, has been applied in a very selective and haphazard fashion.

Because of the imprudence contained herein, the reader may find this study of Edwards and colonial psychology "too ugly" to qualify as decent history. It may appear to smack of rank scientism, a harbinger, perhaps, of the impending positivistic overthrow of the historical profession. Two points should be kept in mind, however, before such a radical conclusion is drawn. First, recall that the near life-long task of Perry Miller, America's greatest literary historian of ideas, was, as he put it, to examine "certain

¹ Daedalus, Winter, 1971, pp. 187-213, p. 207.

² Cambridge, Mass., 1968.

basic continuities [which] persist in a culture."³ The great business of intellectual history is, in his view, to go as far as possible beyond the information given; to synthesize the underlying themes. Likewise, the scientific historian, as I redefine that term in chapter two, he who would apply a contemporary model to history, must implicitly accept this basic contention of modern American historiography's most illustrious literateur: there are basic unifying continuities which exist beneath or beyond the facts as they are known. The "scientist" and "artist" of history differ, in other words, only in the extent to which they accede to Peirce's admonition that they make their ideas clear. Second, the humble working hypothesis contained in the following pages was born of necessity. The whole enterprise began a couple of years ago in response to my utter frustration as a historian of psychology interested in the American origins of American psychology. My good friend and teacher Rand B. Evans has called this the "indigenous American psychology." It seemed clear that the most important figure of this early period was Edwards; any comprehensive study of the indigenous psychology must, therefore, begin with him. Almost immediately after undertaking an intensive study of Edwards it became clear that I was confronted by a psychological thinker who was half modern, half medieval, and wholly incomprehensible to generations of psychological commentators. I

³Errand Into the Wilderness (New York, 1964), pp. 184-185.

simply could not understand Edwards or his interpreters. I was, as Edwards described his parishioners just before conversion, "brought to the borders of despair." My choice, as I saw it, was to forsake the whole blooming mess or, alternatively, to search for an entirely new way to approach Edwards, the "indigenous American psychology," and ultimately the entire history of American psychology. I may yet regret choosing the latter.

There is a curious similarity between the format of this book and that of an experimental report. A report normally proceeds from the introduction (which contains the rationale for doing the study), to the method (including the design, apparatus, and procedure), to the results, to the discussion, conclusions, and suggestions for future research. In chapter two, therefore, the previous work is reviewed. Historians who have dealt with the psychological thought of the colonial period, and with Edwards in particular, fall into two general categories. On the one hand there are the historians of the discipline of psychology who, following Edwin G. Boring, have defined the history of psychology as that stream of historical thought which proceeded toward, through, and beyond Wilhelm Wundt, the first "experimental" psychologist. Since, as far as I know, no aspect of Wundt's system can be said to have originated in the American colonies, Boringian historians of American psychology have reduced the psychological thought of Edwards and the other colonials to the status of a superfluous novelty. "What

possible relevance," they have implicitly asked, "can the barely coherent Puritan chatter about devils, angels, God, and conversion have for contemporary conceptions of psychology?" Their answer, also implicit, is "nothing whatever!"

The other group of historians who have considered Edwards' and colonial psychology, however, define the history of psychology not as an ideational journey through Wundt, but as the record of man's thoughts concerning human nature. Since Edwards and his colleagues had much to say about man's nature, this approach at least allows a good deal of colonial thought to enter the history of psychology as an object of serious study. Yet this study, serious though it has been, has also been remarkably barren. "Human nature" is just too broad and unwieldy a term. In the relatively undifferentiated form that has been adopted by some historians, the history of the psychology (of speculations concerning human nature) of Edwards and the colonials is exceedingly diffuse, almost incoherent. Most are lumped together as "Calvinists," with a couple of Lockeans thrown in for good measure, who offered psychological contributions to Perry Miller's mythical, colonial monolith--the New England Mind.

What, then, were the psychological views of the great Edwards? We simply have not known because his interpreters have either cared deeply about modern psychology but not about him, or have studied him intensely but armed with the vaguest imaginable view of psychology.

Chapter three contains theoretical and empirical justification for the novel method which follows. The principal difficulty with previous analyses of Edwardsean psychology is the unreasonable demands they make on the intuitive powers of the reader. Historians have left either Edwards' thought, or "psychology," or both confusingly vague. In an attempt to correct this situation a case is made for the usefulness of a revised concept of "scientific history." Since history, like science, is an intensely personal and highly selective endeavor, the historian should, like the scientist, publicly display his theoretical assumptions. Boring certainly was "scientific" in this sense: his history was of experimental psychology, the history of the origin and development of a method. Unfortunately for historians of psychology whose interests take them outside the Wundtian mainstream, those who approach the history of psychology as the study of human nature rather than a method, the task of being "scientific," or clear about one's assumptions, is not so easy. What are the dimensions of man's nature? How many things can a man be? Many, obviously. The two most successful attempts made by historians of psychology to distribute man's essence into a manageable yet useful scheme of categories have been made by Robert I. Watson and Michael Wertheimer. Their views are described, combined to some extent, and adopted in chapter three: they become my public assumptions regarding the dimensions of human nature.

The "Prescriptions" of Watson and the "Fundamental Issues" of Wertheimer are useful principally in elaborating the profound paradoxes and complexities in Edwards' psychological theory. Edwards held that man is (a) a rational-emotive unity, and (b) both proactive and reactive. It is demonstrated that this Synthetic viewpoint, as I call it, implies that man is somehow both free and determined, rational and irrational, and he possesses a host of other combinations of attributes which are usually held to be polar opposites. Until recently, whenever the synthetic view has been advocated, as it has by Augustine, Edwards, and the American functionalists, the question of how such a complex man might function has been left unanswered. The synthetic theorists have lacked a model of the mind which can accommodate all the diverse characteristics which they attribute to it. Recently, however, cognitive theorists have constructed such a model, Information Processing, which holds to the rational-emotive and proactive-reactive principles of Edwards.

In chapter four the "apparatus," the synthetic model, is described in its contemporary form. In spite of a number of obvious differences, Edwards and many information processing theorists have asked the same basic psychological questions and given answers which differ only in clarity. What, they have asked, is the nature of the human mind and what is the nature of man's relationship with the environment? The unified, rational-emotive nature of the mind is described

by Neisser, a leading information-processing theorist, as "multiple processing." While we are only aware of our conscious, "sequential" stream of thought, there is a good deal of "parallel," or illogical and usually unconscious activity occurring at all times. All purposeful, goal-direct, conscious activity, it is held, is actually an elaboration of this unconscious, emotionally-laden information. Information-processing theory represents man's relationship to the world as a cybernetic feedback loop--the TOTE unit. Once a person is moved to act by a sense of incongruity he is said to Iest-Operate-Test-and Exit from the loop. He engages in an oscillating give-and-take encounter with the information at his disposal: he receives information but he also selects those aspects of the information which he perceives to be most relevant to his purposes and plans.

We shall see in chapter four that human activity as automatic and mundane as getting out of bed and as difficult and complex as composing a poem can be neatly described with information-processing concepts and terminology. Proactive planning, selecting, and execution is interspersed with reactive reception of needed insights from somewhere on the fringes of the stream of thought. These creative discoveries, great and small, are the product of both activity and inactivity and of a unified rational-emotive process.

The procedure follows in chapter five; the model is applied to Edwards. Armed with the TOTE unit and multiple-processing concepts we plunge into Edwards' psychology and

try to describe it in contemporary terms. In so doing we undoubtedly lose a little of the historical Edwards along the way, but we gain, I believe, a much more explicit understanding of his marvelous intuitive insights into the nature of the human mind and its relation to behavior.

In Edwards' view, the cognitive jaunt through the conversion loop consists mostly in two vigorous and tortuous periods of planning, scheming, and evaluating surrounding a restful, reactive oasis in which God "discovers" himself to the convert. A mostly conscious, rational process is involved in the developing sense of spiritual inadequacy. There is an incongruity between a person's perceived status and an ideal converted status that is mulled over, worried about, and which serves as an impetus to the design of a plan to seek salvation. The scriptures are read, sermons are heard; the individual perceives that he is in need, and he attempts to move sequentially and methodically toward his goal of salvation. The actual "discovery" of grace, however, requires more than conviction, more than a conscious effort to seek God. After the period of "reasoning," of fretting and planning to seek the light, the weary seeker must lay his plan aside and cease to seek. He receives the light; the Lord shouts, as it were, and he listens. It is then, after the intense period of preparation, that the discovery of the divine light may occur. It is then that the Spirit, the "vital indwelling principle," is fused to the mind of the convert. This instantaneous phase is totally reactive; man receives,

beholds, and relishes the divine beauty and perfection of God with a transsummative "sense of the heart."

After traversing these stages the concerned seeker quite naturally wishes to know whether his "experience" is a genuine conversion or merely a work of the devil. He reverts to what Edwards called "reason," or sequential, goal-directed thought as he attempts to evaluate the validity of what he hopes has been a valid conversion. For a variety of reasons, however, Edwards believed that no conversion, not even his own, could be evaluated with any degree of confidence, though he did describe the saintly life of the converted person with great clarity.

Since there are no objective tests to determine the extent of the fit between history and a model, or the overall usefulness of the attempt, chapter six contains no firm conclusions. The question is asked, "what happened to the psychological theory of Jonathan Edwards?" Some preliminary, impressionistic hypotheses are offered. Edwards' doctrine of a unified, rational-emotive mind was gradually but decisively overthrown by a coalition of American and European positions. The Americans usually either objected to his ruthless determinism or did not grasp the subtlety of his arguments. The Scottish and Kantian "faculty" psychologies, on the other hand, provided popular alternatives to Edwards. His proactive-reactive position, however, was clarified and elaborated, and it provided James, Dewey, and the other "Functionalists" with an American precedent for their "new" psychology.

In a sense, then, this monograph has to be "ugly." For though absolute beauty may be, as Coleridge suggested, unity in variety, one's initial esthetic response is usually a function of familiarity. And there will be hardly a reader who does not have to struggle a bit with some unfamiliar aspects of this little enterprise. That is an unavoidable consequence of interdisciplinary research. But we have too long, in my estimation, sacrificed our ambition to provide some "solid angularity" to history in favor of an unfortunate devotion to a stylistic, skin-deep beauty which is based primarily on inertia, departmental provincialism, and in some cases laziness. This is certainly the case in studies of Edwards' psychological thought. After two hundred thirty years of scholarly debate, no one is yet sure what he was trying to say. In his "Editor's Introduction" to Edwards' greatest psychological work, the Religious Affections, John E. Smith has remarked:

. . . the Affections has been praised in vague descriptions; it must now be read and analyzed in a way that is consistent with a work of its stature. The highest praise of a book should proceed not from uncritical acceptance but from a willingness to treat it as important enough to be argued about.⁴

Let the arguments over Edwards' place in the history of psychology begin here. He thrived on controversy and many of his ideas are still controversial and they are being "argued about." The purpose of this book, in a sentence, is to demonstrate that these ideas were also the ideas of one Jonathan

⁴New Haven, 1959, p. 10.

Edwards. "Gracious discoveries given in conversion," Edwards said over and over again, "are grasped with a sense of the heart." This doesn't sound very modern. Edwards' laboratory was a raucous frontier hotbed of fundamental religion, hardly comparable to the hermetic, gadgeted cubicles of modern experimental psychologists. But Edwards also operated in a larger laboratory, an abstract one that all great psychologists eventually inhabit: that mystical melding of observation and imagination known as the study of human nature. It is toward an interpretation of "gracious discoveries" and a "sense of the heart" for modern psychological sensibilities that this study is directed. The reader will discover, I hope, that the implications of this interpretation require a significant reconsideration of the standard conception of the history of American psychology.

But what about the phenomenon of Jonathan Edwards? Is he not, it might be asked, a very special case, a genius whose olympian uniqueness makes studies such as this one equally unique? Possibly, but I doubt it. I have tried to drop a few hints, here and there, which suggest that the entire history of American psychology can, with profit, be viewed through the synthetic model. But the foot is hardly in the door; this general history cannot be written until detailed investigations are carried out within a context that accommodates the data and permits historical comparisons. This study attempts only to establish an oasis of coherence around Edwards, the most important but most misunderstood thinker in

America before James. Robert Lowell said it simply but eloquently in his poem, "Jonathan Edwards in Western Massachusetts." Edwards, he lamented,

. . . stood on stilts in the air.⁵

We shall now attempt to provide some "solid angularity" to what the historian of psychology A. A. Roback has called "the nebulous colonial days" by trying to determine just what Edwards was trying to say; by removing his stilts and demonstrating, I hope, that scientific history need not be dry, trivial, or unnecessarily confusing. After all, good science, good art, and good history are none of these. Neither, certainly, was Jonathan Edwards.

⁵In For the Union Dead (New York, 1956), pp. 40-44.

CHAPTER II

TRADITIONAL APPROACHES TO PSYCHOLOGICAL
THOUGHT IN PURITAN NEW ENGLAND

We live in an age whose thinking is dominated by scientific psychology. Modern children are said to experience oedipal complexes and stages which may or may not be subject to various conditioning techniques. The will of God and the nature of man, as they were formerly known, have been partitioned into countless psychological lieutenants which are discoverable only through a process confidently (or sometimes nervously) referred to as "science." There is a strong feeling prevailing among psychologists and historians of psychology that the human mind and human behavior represent a microcosm of the Newtonian universe, whose laws may be revealed only through experimentation, statistical analysis, and Baconian induction. This view holds, following E. G. Boring, that all psychological thought which did not lead directly to Gustav Fechner's application of psychophysical methods to the mind-body problem and Wilhelm Wundt's first experimental psychology laboratory shall be conceived as a sort of John the Baptist, preparing the way for the advent of scientific psychology.¹ As one contemporary historian of

¹See Edwin G. Boring, A History of Experimental Psychology, 2nd ed. (New York, 1950). Chapters 14 and 16 for Boring's influential assessment of the importance of Fechner and Wundt.

psychology has put it, "The working psychology of today has surrendered its philosophical heritage in fact. It is time to surrender it in voiced principle also."² Philosophical thought beginning with Locke, or perhaps Hobbes, and early physiological investigations, especially those of Johannes Mueller, are seen in this perspective as two tributaries that led inevitably into a common stream of thought which culminated in the founding by Fechner and Wundt of psychology as a science.³ These events, the invention of Fechner's psychophysical methods and Wundt's "founding" of experimental psychology, symbolize psychology's birth and are said to obviate the 2,000 year European tradition of philosophical psychology that came before.

The History of Psychology in America

The dominant view of the history of European psychology may thus be characterized for the most part as apocalyptic and progressionist. The history of American psychology is usually viewed in a slightly different way. It is apocalyptic, without a doubt: American psychology is usually thought to have been born with the publication of William James' Principles of Psychology in 1890.⁴ It is

²Duane P. Shultz, A History of Modern Psychology (New York, 1969), p. vii.

³See Boring, History, Chapter 2.

⁴William James, Principles of Psychology, 2 Vols. (New York, 1890).

hardly progressionist, however. James, though an American, is usually characterized as European in spirit and as the American popularizer, critic, and integrator of the European (chiefly German) experimental work prior to 1890.⁵ It is quite safe to assume, in fact, that many, perhaps most, contemporary American psychologists would be incapable of identifying a single person or publication of psychological importance in America in the two hundred sixty years of American thought before James. Pre-Jamesian, or pre-"scientific" psychology in America is thought of, if at all, as a myth.⁶

Reasons for the unwillingness of historians of psychology to consider pre-Jamesian American psychological thought (assuming, for the moment, that such a phenomenon exists) are

⁵It is slightly odd that James should continue to occupy so prominent a place in the history of American psychology. Although he did apparently found America's first experimental psychological laboratory, almost incidentally as it were, and he is also responsible for the most comprehensive survey of the "new psychology" to 1890, he personally cared little for the fledgling discipline. He hated tedious laboratory work, and once characterized the new field as a "nasty little science." He held many of the German practitioners of laboratory psychology in utter disdain, once claiming that the only virtue of "brass instrument" psychologists like Fechner and Wundt was their affinity for tedious, boring, tinkering in labs. See R. B. Perry, The Thought and Character of William James, 2 Vols. (Boston, 1935).

⁶Of the recent general histories of psychology, only two give more than the merest mention of American psychological thought before James and the importation of the "new psychology" in the 1880s: Virginia Sexton and Hendryk Misiak, History of Psychology: An Overview (New York, 1966), and Gardner Murphy and Joseph K. Kovach, Historical Introduction to Modern Psychology, 3rd ed. (New York, 1972), each devotes approximately two pages to American psychology from 1630-1880.

abundant. First, American thinkers of the seventeenth, eighteenth, and nineteenth centuries were not psychologists. Most were theologians whose discussions of psychology were ancillary to other theological purposes and issues. Modern psychologists look askance at the thinking of a quaint age whose "naivete" inclined them to utter dependence upon their conception of God. Except among theologians and church historians, American colonial theology appears to be a curio worthy of only a certain antiquarian respect. The probability that colonial theologians could have inherited, altered, devised, revised and fought over timeless psychological issues seems remote to historians of psychology, based on the attention thus far afforded the colonials. A barrier exists between them and the present; a barrier of assumptions, language, and purposes that is formidable. Second, the theologians of America's first two and a half centuries were not scientific in the sense that psychologists from Fechner to the present have defined "scientific." Most did not formulate explicit psychological theories, generate testable hypotheses, isolate salient independent variables in experimental situations, or attempt to state general laws of thinking and behavior based on experimentation.⁷ Many of them simply but carefully observed the conversion experiences of themselves

⁷This was reinforced by the development of logical positivism bequeathed to psychology from late nineteenth and early twentieth century physics. See Herbert Feigl and May Brodbeck, eds., Readings in the Philosophy of Science (New York, 1953).

and their parishioners and tried to explain what happen in mind and body during a visitation of the Spirit. A few of these explanations, such as that of Jonathan Edwards, were developed into elaborate theories of the mind and human nature, while others remained only intellectual exercises of curious ministers. A third reason for contemporary ignorance of pre-Jamesian American psychology is that American theological thought was not an obvious contributor to either the European philosophical or physiological traditions which are generally believed to have led directly to Fechner, Wundt and beyond. The usual interpretation of Wundt, who is usually given primary credit for establishing experimental psychology as an independent science, is that of an industrious German physiologist whose life's ambition was to discover the elusive mental elements of the British Empiricists from Locke to James Mill. Implicit in this view is the notion that America was a psychological backwater whose stagnation was relieved only after the Americans, G. Stanley Hall, James McKeen Cattell and others, escaped to Europe in the 1880s and later imported the new German psychology.

The dominant progressionist or vertical timeline approach to the history of psychology successfully condemns pre-Jamesian American psychology to a status of non-existence, or at least superfluosness. Clearly, Fechner and Wundt could have claimed if they had wished, that the psychophysical methods would have been discovered and experimental introspective psychology founded even if America had

still been populated exclusively by food-gathering tribesmen.⁸ It is literal science-fiction to claim that German experimental psychology would hardly have been the same without Cotton Mather or Jonathan Edwards. In fact, the narrow progressionist view of the history of psychology condemns to oblivion all thinking that cannot be inserted as a causal link in the chain of scientific progress that led through Fechner and Wundt to the present. The ancient Greeks, Augustine, Aquinas, and numerous others are given short shrift because the extent of their "influence" upon Fechner and Wundt is too amorphous to be accurately assessed.⁹ This view, though chiefly associated with Boring, is by far the dominant one held by contemporary psychologists toward the history of their discipline. It is no doubt reassuring to twentieth-century psychologists, whose scientific status has

⁸An apocryphal story, however, attributes Wundt's staggering productivity to his discovery of the American typewriter. Boring's (History, p. 322) authoritative denial of this claim destroys America's only apparent opportunity to demonstrate that the new German psychology was somehow indebted to her.

⁹Boring's History, in addition to a number of his other historical papers, demonstrates a consuming interest in influences, i.e., who was so-and-so's student and who were his students, etc.; cf. Edwin G. Boring and Mollie D. Boring, "Masters and Pupils among the American Psychologists," American Journal of Psychology, 1948, 61, 527-534.

The subject of "influences" was sufficiently interesting to Boring that discussions of professional genealogy often spilled over into non-psychological subjects. He lists, for instance, the twenty-five most illustrious students of G. Stanley Hall, and points out that "Hall's executive personality made him a practical psychologist, and thus an educational psychologist, and thus a president. Do pupils take after their "master?" Boring asks. "Well," he replies, "the foregoing list contained in 1929 four college presidents, four college deans, and one superintendent of schools--a third altogether." (Boring, History, p. 546).

often been held suspect by scientists of older disciplines, to believe that one's professional roots are deeply and exclusively embedded in a consciously "scientific" tradition.

Curiously, only professional psychologists and a few philosophers of science are apt to view the history of psychology as an inexorable quest for a separate, scientific discipline. Asked to name history's greatest psychologist, a person from outside the formal discipline of psychology might reply Plato rather than Freud; Thomas Aquinas, rather than Wundt. It might be contended, for instance, that Plato's analysis of good and evil is at least as profound as Freud's while the Thomistic view of the mind, or soul as he (Thomas) preferred to call it, is more succinct and believable than Wundt's. While an open-minded contemporary psychologist or historian of psychology might be inclined to agree that perhaps Plato and Thomas may have surpassed Freud and Wundt in certain respects, he would still be disinclined to revise his approach to the history of psychology. Plato and Thomas, though interesting, must remain professionally irrelevant to him. Neither did laboratory experiments, handled data, or even described clinical cases. Neither contributed to the establishment of an independent discipline of psychology which might be defined by a body of subject matter and methods of inquiry peculiar to itself.

It is obvious that those who claim to compare Plato with Freud and Thomas with Wundt "Psychologically" do not view the history of psychology as a teleological progression

toward contemporary "scientific" syntheses. This other broader, more interdisciplinary approach to the history of psychology is associated with G. S. Brett, and it is this view which has been adopted in this study of Edwards.¹⁰ The three-volume History of Brett, a philosopher, was conceived under the assumption that psychology should not be defined in terms of the subject matter or methods of twentieth century psychology, but rather as a series of questions about human nature which have grown out of a variety of traditions of inquiry. He loosely divided these traditions into religious, medical, and philosophical. This approach might be called the human nature or conceptual approach to the history of psychology and man, not a discipline, is the principle object of its inquiry.

Human nature is an immense topic to hoard in an undifferentiated form under the umbrella of the history of psychology. Man, obviously, is or is not many things: he has free will or he does not; he is good or he is evil; he is rational or irrational, etc. Few historians of psychology, including Brett, have attempted to clearly delineate the types of questions which constitute a religious, medical, or philosophical inquiry into the nature of man. Few attempts,

¹⁰G. S. Brett, History of Psychology, 3 Vols. (London, 1912-1921). Brett's monument has been compressed into a valuable one-volume abridged edition by R. S. Peters (Cambridge, Mass., 1965). An enlightening introduction to and defense of Brett's human-nature approach to the history of psychology may be found in Peters' introductory chapter, "Theory, Policy, and Technology" (Peters, ed., pp. 25-36). The "Human Nature" approach is also taken by Robert I. Watson; see The Great Psychologist: Aristotle to Freud (Philadelphia, 1972).

that is, have been made by historians of psychology to identify the dimensions of human nature.¹¹ Thus, much history of psychology written from a human-nature point of view, is liberal to the point of transparency. It becomes impossible to differentiate the history of psychology from the history of all thought, a situation which can lead to extreme confusion. A progressionist historian like Boring knows that psychology is whatever seems to flow through a historical, intellectual hourglass at whose narrow neck stand Fechner and Wundt. The added breadth of the conceptual historian is purchased at a price. Neither he nor his reader knows, specifically, what he is talking about when he speaks of psychology.

Psychology on the Periphery of the New

England Mind: Perry Miller

The dilemma of the conceptual historian of psychology, of he who views psychology as a series of questions about human nature, is that it is extremely difficult to be historically accurate and comprehensible to historically-minded behavioral scientists. Ideally, the historian should have exhaustive knowledge of his era of special interest and good facility with the contemporary psychological jargon and usage

¹¹The most important exception is Robert I. Watson, "Psychology: A Prescriptive Science," American Psychologist, 1967, 22, 435-443. Many of the prescriptions which are said to characterize psychology represent various dimensions of the rather amorphous "human nature" studied by Brett. See Chapter 2 for a detailed summary of prescriptive theory and a demonstration of its usefulness in the study of Jonathan Edwards' psychological theory.

of his readership. Unless some agreed-upon conceptual scheme exists which can accommodate the historical theory and the modern viewpoint, the conceptual historian should be capable of providing the framework on his own. Since at present no widely-accepted conceptual scheme exists for the historian of psychology, the burden of striking a balance between anti-quarian irrelevance and contextual larceny rests on the shoulders of the individual historian. Unfortunately, but perhaps not surprisingly, interpreters of the psychological views of American Puritanism, the tradition from which Edwards emerged, do not satisfy these rigorous and diverse requirements. Some, like Perry Miller, were intimately familiar with the Puritans and Puritanism but blissfully ignorant of modern psychology and terribly sloppy in their usage of psychological jargon.¹² Others, such as A. A. Roback, have been competent professional psychologists who apparently never read a word written by a colonial Puritan.¹³ Still another, J. W. Fay, seems to have understood little about the Puritans and less about contemporary psychology.¹⁴ This unfortunate situation must be reviewed briefly, not out of malice toward those brave scholars who have ventured wholeheartedly but half informed into American Puritan psychology, but because most

¹²Perry Miller, The New England Mind: The Seventeenth Century (Boston, 1961).

¹³Abraham Aaron Roback, A History of American Psychology (New York, 1964).

¹⁴Jay Wharton Fay, American Psychology Before William James (New Brunswick, N.J., 1939).

of the deficiencies of Puritan psychological scholarship generally are also present in the more extensive work on Edwards. This review represents the beginning of a demonstration that a new approach to pre-Jamesian psychology in America is needed, and especially with regard to Edwards, its most important and provocative theorist.

It has been remarked that the historian cannot hope to get inside the "mind" of the Puritans.¹⁵ We believe events are caused by atoms, molecules, cells, gravity, Ids, Egos, and other unseen substances. The New England Puritan, on the other hand, attributed events to God, devils, angels, archangels, animal spirits, saintly intervention, and a host of other causal constructs.¹⁶ Probably no man ever succeeded in entering the forbidden ground inside the Puritan mind to extent that Perry Miller did. He claimed often, and arrogantly, to have read, digested and integrated everything of importance ever written by Puritans on both sides of the Atlantic. His books and articles are the starting point for every aspiring Puritan scholar; they are monuments of erudition, complexity, insight, creativity, and frustration. The density of his convoluted style has much in common with the expository form of Finnegan's Wake. Thoreau described Miller

¹⁵Herbert W. Schneider, The Puritan Mind (Ann Arbor, 1958), pp. 3-7.

¹⁶See Arthur O. Lovejoy, The Great Chain of Being (Cambridge, Mass., 1936), for the definitive summary of the medieval world view which was inherited by the New England Puritans.

perfectly when he issued his dictum that a reader should take as long to read a book as it took the author to write it. In reading Miller's New England Mind, one simply must follow Thoreau's advice or drown in a sea of beautiful words.

Miller's analysis of Puritan psychology is confined principally to a chapter on "The Nature of Man" in the New England Mind: The Seventeenth Century.¹⁷ Psychology, generally speaking, is for Miller "a certain method of the soul," used to elucidate "the method of grace" (i.e., conversion).¹⁸ There were no psychologists in Puritan New England. There were, however, inventive scholars who were willing to employ a scholastic faculty psychology to explain the dualistic dilemma inherent in the conversion experience.¹⁹ Miller summarized the Puritan notion of the mechanics of conversion in a manner that is more fanciful, yet also more concise than typical Puritan expressions of the topic:

If original sin is a dislocation of the faculties, then regeneration must set them right again. If in nature the original sequence of sensation, common sense, fancy, reason, memory, will, and affection is now broken, it follows that in a converted nature the reflex must be reconstructed. When conversion was described in the vocabulary of psychology it became in effect a realignment of twisted pulleys and tangled ropes, permitting the blocks once more to turn freely and the tackle to run

¹⁷ Seventeenth Century, pp. 239-279.

¹⁸ Ibid., p. 239.

¹⁹ See J. Rodney Fulcher, "Puritans and the Passions: The Faculty Psychology in American Puritanism." Journal of the History of the Behavioral Sciences, 1973, 9, 123-139, for an account, derived largely from Miller, of the scholastic origins of seventeenth-century Puritan psychological views.

smoothly, in accordance with the first plan of the rigging.²⁰

God was said to work through "means," i.e., through the mechanical organization of the faculties; and most importantly the work of regeneration consisted in a regeneration of the rational faculty. A regenerated reason would be capable of rationally comprehending the will of God, although God, of course, remained sovereign and need not reveal His intentions even to a converted man. Reason was vitally important because the will, the passions, and all the other numerous faculties attributed to man were said to follow, for the most part, the dictates of the rational faculty. Thus Miller would hold that the "vocabulary of psychology," as he called the various hypothetical faculties, and views concerning human nature, were inextricably intertwined. A theorist who emphasized the importance of the faculty of reason in the conversion experience would necessarily hold that man is primarily a rational creature. A divine who claimed that the reorientation of the will and affections (or emotions) was central to conversion might be said to view man as primarily emotional or irrational.

In holding that psychology is concerned with questions of human nature, Miller followed Brett.²¹ It is unfortunate that Miller did not go beyond Brett to provide an explicit

²⁰Miller, Seventeenth Century, p. 280.

²¹Miller probably derived his implicit view of psychology directly from Brett. Miller's chapter on "The Nature of Man" contains more references to Brett than to any other secondary source.

conceptual scheme with which to define and interpret psychological views of human nature. With rare exceptions, Miller was content to quote and catalogue each theorist's arrangement of or comments upon the faculties. The mind is portrayed somewhat like a jigsaw puzzle with hundreds of sets of directions. The "New England Mind," like any conglomerate construct, is complex, and Miller described that complexity in remarkable detail. Yet we normally do not need a guide to inform us that there are many trees in the forest, all slightly different from each other. We would rather be shown a path that leads through it. What, one must ask after reading Miller's long chapter on "The Nature of Man," is the Puritan conception of the nature of man?

Instead of providing a synthesis of Puritan psychology, Miller preferred to offer speculations concerning why the Puritan treatises were not very psychological in nature. This may appear odd since Miller also claimed that " . . . in Puritan writing there are almost enough passing allusions to each part of the psychological reflex to furnish the material for extended chapters."²² Yet speculation was Miller's forte, and his treatment of Puritan psychology is riddled with the implication that certain "unconscious" motives dictated the alledged scanty volume of Puritan psychological inquiry. He indicates that the Puritans had a "vague sense" of the incongruities in their system, especially

²²Miller, Seventeenth Century, p. 245.

regarding the manner in which the conversion experience could be both "an irresistible seizure and a rational transaction."²³

Miller asked,

. . . was it possibly because they sense, however obscurely, that there were further difficulties within it [their psychology] which, if exposed too openly, would raise uncomfortable queries in more important regions?²⁴

Was it, in other words, some vague sense of insecurity which held the Puritans at arm's length from the systematic and careful investigation which characterized most of their intellectual endeavors?

Miller's flights of fancy into the unconscious motivations of the Puritans are both literarily effective and intellectually frustrating. His detours far beyond the available evidence often are stimulating and productive of further investigation.²⁵ The frustration occurs, however, when one attempts to evaluate the validity of some of his claims. There are two sources of frustration. First, in the case of Puritan psychology, the object of inquiry lacks even

²³ Ibid., p. 287.

²⁴ Ibid., p. 267.

²⁵ Cf. my own response to Miller's innuendoes about an alleged "unconscious" conflict between Increase Mather and Solomon Stoddard in the late seventeenth and early eighteenth centuries: James G. Blight, "Solomon Stoddard's Safety of Appearing and the Dissolution of the Faculty Psychology." Journal of the History of the Behavioral Sciences. The usual interpretation of the antipathy between these two patriarchs involves their differing views over church polity, with Mather characterized as the old, hard-line Bostonian and Stoddard the rebellious frontiersman who was willing to let almost anyone join his Northampton congregation. Miller contended that the conflict went deeper, down to the frightening (to Mather), irrational conception of man sketched in Stoddard's treatise,

a simple definition. How can psychology, which by Miller's own admission is concerned with "The Nature of Man," be defined as a "certain method of the soul?" Neither the dimensions of human nature, nor the explicit relationship between human nature and the "method" is revealed. The flights of fancy, then, have no firm base from which to embark. When we are told that the Puritans unconsciously refrained from indulging in detailed analyses of psychology, we do not know what it was that they weren't doing. The second source of frustration is Miller's fertile imagination. He was attempted a sort of psychohistory devoid of the theoretical framework of psychoanalysis (or any other structure). Miller knew the New England mind better perhaps than anyone will every know it again. Yet Puritan psychology remains mostly shrouded in mystery because he lacked a conceptual scheme which could define psychology in a way that bridges the gap of centuries. He talked around the issues rather than to them. Some structure certainly would have helped prevent excursions into a historical Alice-in-Wonderland where nobody says what he thinks he said and no one's conscious motives are the functional ones.²⁶

The Safety of Appearing. In my view, there is much evidence which supports Miller's interpretation.

²⁶One of Miller's most brilliant, and controversial students is Alan Heimert. In Religion and the American Mind: From the Great Awakening to the Revolution (Cambridge, Mass., 1966), Heimer, like Miller, often prefers to record and interpret what he feels historical figures "meant" rather than what they said. This approach strikes some historians as a perversion of historiography, and one critic's evaluation of

The New England Mind on the Periphery of
Psychology: Roback and Fay

Prior to the revival of interest in Puritanism early in this century, the very word "Puritan" had an unsavory connotation, even among scholars.²⁷ Puritans were those nasty, narrowminded forebears of ours who attached scarlet letters to the chests of passionate young women, executed so-called "witches," dressed in black, and worried a lot about whether or not they were going to heaven. Their intellectual pinnacle was reached, it was often thought, with Michael Wiggleworth's abominable poem, "Day of Doom," which described the road to hell as paved with the skulls of young children.

Perry Miller and his colleagues rejected this simple-minded, vindictive approach to the Puritans and attempted to meet them on their own terms and treat them as complex individuals who grappled with some of the most important intellectual issues of their day. If Miller's analysis of the

Heimert might easily be applied to Miller, his mentor.

The world he offers us has been constructed by reading beyond the lines of what men said; and what he finds beyond the lines is so far beyond, so wrenched from the context, and so at odds with empirical evidence, that his world, to this reviewer at least, partakes more of fantasy than of history.

From Edmund S. Morgan in William and Mary Quarterly, 1967, 24, p. 459.

²⁷The recent rejection of this view of the Puritan heritage began with Kenneth B. Murdock's Increase Mather: Foremost American Puritan (Cambridge, Mass., 1925), continued through the many works of Samuel Eliot Morison, and culminated in Miller. See Edmund S. Morgan, "The Historians of Early New England," in Ray Allen Billington, ed., The Reinterpretation of Early American History (New York, 1968), pp. 41-63.

psychological system of the Puritans is of limited usefulness to a historian of psychology, it is because his approach lacks perspective and structure, not because Puritanism is perceived as a psychological wasteland, devoid of raw material.

No such claim can be made for the two remaining analysts of New England Puritan psychology whose work will be reviewed in this section: A. A. Roback and J. W. Fay. To these writers, the Puritan revival never happened; the colonial New England intellectuals are objects of subtle scorn and curious amazement rather than serious scholarship. This is unfortunate because, unlike Miller, Roback was very knowledgeable about modern psychology and, had he therefore taken the Puritans seriously, he might have provided the conceptual bridge which could have clearly elaborated Puritan psychology and presented it in a form comprehensible to contemporary historians.

Roback's attitude toward Puritan psychology is best described as shallow, condescending amusement. There is no indication that Roback ever read anything written by a colonial Puritan.²⁸ He mentions a few theses done at Harvard in the seventeenth century which, along with William Brattles' logic digest, are said to contain "a sprinkling of psychological facts, as they were then known."²⁹ Just what these "facts"

²⁸Roback selects most of his information about Puritan psychology from the secondary accounts of S. E. Morison.

²⁹Roback, History, p. 35.

are, however, and what makes them "psychological" unfortunately remain unknown to the reader. His chief argument against the Puritans seems to be that they were religious, and that they therefore must have possessed an inferior system of psychology.³⁰ Speaking of the colonial Puritans, he wrote:

If psychology is handed down to us on a golden catechistic platter, then what need is there for seeking more information? The definitions, vague and hazy, as they were, made sense to the students of the time, and saved them the bother of thinking . . .

It is clear that no empirical science could advance on the basis of postulates and definitions alone. So long as psychology remained the succubus of theology, as was the case throughout the seventeenth century and during the early decades of the eighteenth century, it could only rest on the accepted authority of the past.³¹

Roback's conception of the history of psychology is a diluted compromise between Boring's progressionist approach and Brett's position that psychology should be defined as a series of questions concerning the nature of man. Roback was willing, like Brett, to consider the thought of many individuals outside the mainstream which led through Fechner and Wundt to twentieth-century experimental psychology. Yet instead of defining the history of psychology as past inquiries into human nature, Roback tends to evaluate colonial thinkers in a Boring-like fashion: in terms of the extent to which their

³⁰ Roback also uses this implicit argument against contemporary Neo-Scholastic psychology in America (pp. 424-446). It is remarkable that he apparently saw no similarities between Puritan psychology and Neo-Scholasticism. Both, of course, employ a "faculty" psychology that they extract in almost unadulterated form, from Thomas Aquinas.

³¹ Roback, History, pp. 36-37.

views approximate some trend or other in experimental psychology. Thus, after haranguing "pastoral psychologist" Cotton Mather for "taking stock in the absurdities of witchcraft," Roback offers the backhanded compliment that he "managed to introduce some observation which could be considered psychological and which must have particularly impressed the listeners."³² The nature of the psychological views of Mather remains a mystery, for by definition almost, in Roback's confused scheme, neither Mather nor any of his contemporaries are permitted to have significant psychological views. Roback wished to elucidate the neglected psychological thought of the "nebulous colonial days," as he calls the era, yet the thinkers of the period were religious men concerned with, among other things, the nature of man. Roback, on the other hand, viewed religion, or Christianity at any rate, as a plague on psychology, which he implicitly defined in terms of twentieth-century conceptions which prevented him from obtaining even a glimmering of Puritan psychology. Somewhere between these two, but certainly closer to Roback, stands J. W. Fay. His monograph demonstrates a much more careful reading of the sources than is shown by Roback, although it is admittedly sketchy when compared to Miller's exhaustive treatment.³³ Yet if Miller looked forward from his seventeenth century vantage point in search of

³²Ibid., pp. 38-39.

³³American Psychology.

modern "Puritans," Fay, like Roback though to a lesser extent, looked back in American history in search of colonial "psychologists." Fay states:

. . . the science had not yet taken shape, and ideas which belong properly to that field [psychology] are disguised and hidden beneath a theological terminology that is most misleading. Interminable discussions of "predestination," will be found to involve conceptions of the will, and the momentous question of "original sin" is weighted with consideration of heredity and the transmission of original and acquired characteristics.³⁴

There is a problem with this statement. Theological concerns are misleading only to the historian who ignores the theological context out of which the psychological ideas arose. Fay, like Roback, attempted unsuccessfully to amalgamate the progressionist approach and the human-nature view. Their purposes, however, were quite different. Fay sought to prove, in effect, that the theological psychology of America's first two and a half centuries made important contributions to American psychology after William James. These early thinkers, Fay holds, were "strong in philosophical insight into some of the most real and important problems of an empirical science, both introspective and behavioristic . . ."³⁵ Roback's confused assimilation of the progressionist and human-nature viewpoints, it will be recalled, came not to praise the religious psychologists, but to bury them.

In Fay's defense, it must be said that, although he did little to ameliorate Brett's dilemma concerning the

³⁴Ibid., p. 6.

³⁵Ibid., p. 169.

dimensions of human nature and although like Boring he looks backward for antecedents, his book is far more valuable than Roback's. Unlike Roback, Fay was not a psychologist, but a philosopher. Like many philosophical students of psychology, he viewed modern psychology as in many respects coterminous with its philosophical roots. In this view modern psychology is just a new method for studying old problems like "will" or "the mind-body problem," and it is not the new method but the old problems that should occupy the focus of attention.³⁶ Thus, when Fay looked backward into colonial Puritanism, he saw old friends where Roback saw only new enemies.

The Centrality of Jonathan Edwards

There are a number of fascinating parallels between the lives and professional careers of Wilhem Wundt and Jonathan Edwards. Both were sons of Protestant ministers, and each matured into an austere, industrious, combative thinker. Wundt chose to alienate his most brilliant student, Oswald Külpe, rather than bend his own system to accommodate the "imageless thoughts" discovered at Külpe's laboratory,³⁷ Edwards chose virtual banishment to a frontier outpost in Stockbridge, Massachusetts rather than "cheapen" the

³⁶This general orientation toward psychology and its history is sometimes referred to as the philosophy of mind. For a recent outline of this interdisciplinary outlook, see Stuart Hampshire, ed., The Philosophy of Mind (New York, 1966).

³⁷See Boring, History, pp. 396-410, for an analysis of the differences between Wundt and Külpe. Wundt's scathing denunciation of Külpe's "School of psychology" is discussed by Robert I. Watson, Great Psychologists.

requirements for membership in his Northampton congregation.³⁸ Though neither was British, the philosophy of British Empiricism, chiefly that of Locke, played a decisive role in the formulation of their mature theories. Wundt saw his task as the integration of empiricist philosophy with the experimental methods of German physiology, while Edwards tried to unite Lockean empiricism with the Christian theology of Augustine and Calvin.

More important than these coincidental similarities is the manner in which certain intellectual historians have evaluated their importance. The hourglass is the appropriate metaphor for historians' judgement of both Wundt and Edwards.

To Boring, all psychological roads lead to, through, and away from Wundt.

Wundt is the senior psychologist in the history of psychology. He is the first man who without reservation is properly called a psychologist.³⁹

³⁸J. R. Trumbull's History of Northampton, 2 vols., (Northampton, Mass., 1898), provides a detailed account of this controversy; see also Ola Elizabeth Winslow, Jonathan Edwards (New York, 1940), pp. 241-267. Robert Lowell sees the controversy this way:

Yet people were spiders

in your moment of glory,
at the Great Awakening--"Alas, how many
in this very meeting house are more than likely
to remember my discourse in hell!"

The meeting house remembered!
You stood on stilts in the air,
but you fell from your parish.
"All rising is by a winding stair."

From "Jonathan Edwards in Western Massachusetts."

³⁹Boring, History, p. 316.

"Descartes, Leibniz, and Locke on the philosophical side" are included in Boring's narrative only because "the genetic account requires the explanation of the new movement in terms of its ancestry."⁴⁰ Likewise, "almost all the new schools of psychology have been founded as a protest against some one or another characteristic of Wundt's psychology."⁴¹ Wundt is thus seen as a kind of narrow neck of the hourglass, integrating material from diverse strains of thought into an intellectual system which became the standard of agreement and disagreement for generations.

To most historians of American theology Edwards, like Wundt, represents a synthetic culmination of the past who became a beacon light of the future. Most would still agree with George Bancroft's famous remark that "He that would know the workings of the New England Mind in the middle of the last century and the throbbings of its heart, must give his days and nights to the study of Jonathan Edwards."⁴² It has been contended, for instance, that Edwards' synthesis of Lockean empiricism and Calvinist theology contributed to the development of a tradition of American fundamentalism, transcendentalism, and even the American revolution.⁴³ In addition,

⁴⁰Boring, preface to first edition of the History (New York, 1929).

⁴¹Boring, History, op. cit., p. 343.

⁴²Quoted in Alexander V. G. Allen, Jonathan Edwards (Boston, 1889), p. vi.

⁴³On Edwards and the fundamentalist tradition, consult William Warren Sweet, Revivalism in America (New York,

the rise of the "New England Theology," an apologia for Edwards written by his descendants (chiefly), served much the same function as Wundt's psychology. Its doctrines were so complex and its conclusions so objectionable to some that it gave intellectuals something to argue over for generations.⁴⁴

The centrality of Edwards is no accident or bit of historical fiction perpetrated by historians of theology. Like Wundt, Edwards understood his mission; he knew what he was up to. His self-appointed task was to restore New England Puritanism to its former purity.⁴⁵ This would require strenuous disputations against deistic and Arminian types who were clamoring that man had a "free will." It would necessitate cleansing the churches of those who could not demonstrate publicly that they had been visited by the Holy Spirit. And most importantly, it would demand a skillful, delicate weaving together, in theory and in practice, of the traditional Puritan emphases upon heartfelt piety and the rational

1944) and Bernard A. Wisberger, They Gathered at the River (Boston, 1958). Perry Miller fills in the gaps between Edwards and the transcendental movement in "From Edwards to Emerson" in Errand into the Wilderness, pp. 184-203. The connection between Edwards "New Light" theology and preaching and the American Revolution is explored in Heimert, Religion.

⁴⁴ Joseph Haroutunian, Piety Versus Moralism: The Passing of the New England Theology (New York, 1932).

⁴⁵ This is the so-called "tragic" aspect of Edwards. In general, this view of Edwards acknowledges his powerful intellectual gifts but regrets the alleged time-worn, dead issues to which he addressed himself. Edwards, it is held, yearned to recreate a medieval Bible commonwealth when he might have used his extraordinary gifts to foster the American importation of the European Enlightenment. Expressions of this view may be found in Peter Gay, A Loss of Mastery:

intellect. As the storm of the Great Awakening was raging around and in Edwards, he recognized that the warring fundamentalists and rationalists represented traditional polarities within Puritanism that needed to be united if the faith was to survive intact. In order to show that the act of faith, and in fact all human perception, is both rational and emotional, he needed to go beyond the traditional disjunctive faculty psychology he inherited and the Lockean psychology he adopted. Paul Conkin has commented upon "Edwards' belief in an unending but orderly creativity."⁴⁶ This conception of the universe might also be applied to Edwards himself; all of Edwards' thinking resembles an urgent quest for a Bergsonian creative synthesis.

The Problem of Describing Edwards' Psychological Theory

Unfortunately, Edwards' commentators have not been as creatively synthetic as he was. A careful analysis of secondary interpretations of the psychological views of Edwards results in a loosely-organized confusion. We are asked, in effect, to appreciate Edwards for what he tried to say, rather than for what he said. Although it must seem odd indeed considering the volume of attention given Edwards, it

Puritan Historians in Colonial America (Berkeley, Calif., 1966) and Vernon L. Parrington, The Colonial Mind (New York, 1927).

⁴⁶Paul Conkin, Puritans and Pragmatists (New York, 1968), p. 52.

is still unclear just what he said, psychologically. There are three principal reasons for the shadowy status of Edwards' psychology. First, Edwards' style of exposition is certainly no model of grace and clarity. He was groping for a way to say what he meant, sometimes expressing himself in the language of Augustinian piety, sometimes through borrowed Lockean terminology, and other times through a confusing combination of both modes.⁴⁷ He lacked the linguistic tools which he needed to express his vision of an extraordinarily complex yet unified human mind, and human nature. Edwards cannot shoulder all the blame, however. Intellectual historians simply have not been very interested in his psychological system. In most cases, brief discussions of Edwards' psychology are decidedly ancillary to other analyses of his "theory of beauty," "theology," or "philosophical theology."⁴⁸ Presumably, these historians have implicitly adopted Brett's approach to the history of psychology; Edwards' "psychology" is loosely defined as statements about mental constructs which reflect a view of human nature. Unfortunately, but not

⁴⁷See Paul Ramsey's "Editor's Introduction" to Edwards' Freedom of the Will (New Haven, 1957) for a discussion which clarifies, to some extent, Edwards' confusing interchanges of terminology.

⁴⁸Clarence Faust and Thomas Johnson, eds., Jonathan Edwards: Representative Selections (New York, 1962), hold that Edwards' psychology ("Edwards' view of human nature") provides the base for his system whose apex is his doctrine of grace. Nearly all analyses of Edwards' psychology are undertaken as footnotes to aspects of his system which lay between the base and the apex, such as the doctrines of depravity or virtue (p. xvi).

surprisingly, the dimensions of human nature addressed by Edwards' psychology have never been elaborated. A final source of confusion over the description of Edwards' psychology has been caused by an apparent misunderstanding of the nature of psychological theorizing.

Too often Edwards is treated as if he were merely a disputant who thrived on hair-splitting combat. This is a half-truth at best. Edwards' theory of psychology was revolutionary and truly revolutionary theories do not merely refute old views point-for-point, they completely redefine a problem or area of interest.⁴⁹ Sometimes, by approaching the problem from a different level of analysis, a theorist is able to accommodate views which formerly seemed irreconcilable. Instead of trying to make theoretical sense out of Edwards' apparent and remarkable contentions that man is, for instance, static and dynamic, free and determined, etc., the commentators have, like Edwards' contemporaries, thrown up their hands in

⁴⁹ This is certainly true in the natural sciences. The Copernican and Newtonian revolutions, for example, can hardly be construed as arguments over the empirical inadequacies of Ptolemaic astronomy or Aristotelian physics. They were, instead, complete reorganizations of the conception of the universe. They were, in a word, creative. See Thomas S. Kuhn, The Structure of Scientific Revolutions, 2nd ed. (Chicago, 1970) for an elaboration of scientific creativity in this context. More generally, Brewster Ghiselin speaks of creativity of the "higher, primary sort" as that which alters the universe of meaning itself, by introducing into it some new element of meaning or some new order of significance, or more commonly, both . . . Whatever its relation to the established universe of thought, the higher sort of creative action invariably brings into the mind an unfamiliar light.

"Ultimate Criteria for Two Levels of Creativity," in Frank Barron and Calvin W. Taylor, eds., Scientific Creativity: Its Recognition and Development (New York, 1963), pp. 42-43. That

frustration. But in this instance also, the historians should not be unduly blamed for they, like Edwards, lacked a coherent theoretical structure into which they could appropriately place Edwards' psychology. It is a major contention of this essay that such an appropriate, explicit structure now exists.⁵⁰

The Debate Over Edwards'

Psychological Theory

Most of the confusion surrounding Edwards' psychology concerns two broad dimensions of human nature: (1) Is man a functional, fully-integrated unity, or a well-oiled collection of complementary but disjunctive parts? (2) Is man primarily proactive or reactive as he perceives and conceives aspects of the universe? It must be pointed out that commentators upon Edwards' psychology have not dichotomized their dispute in this way; indeed there is no evidence that differences of opinion have even been clearly perceived. This is to be expected since one must have some clear notion of "psychology" in mind, and a particular view toward that of Edwards, before he can determine that his definitional criteria have been violated or his personal position attacked.

Edwards was endowed with extreme creativeness was clearly recognized by an early biographer, S. E. Dwight:

These selections ["Notes on the Mind"] not only evince uncommon clearness of perception, and strength of discrimination, in the mind of Edwards, at that early age; but also prove that it had begun to be, in no mean degree, what it was afterwards, in a singular degree, CREATIVE. (Life of President Edwards, New York, 1830, p. 39).

⁵⁰See Chapter 4.

Those who thus far have presumed to describe and judge the psychology of Edwards have lacked both.

Man: An Integrated Unity or
Collection of Parts?

It is curious that those historians who are least acquainted with Edwards have no trouble whatever in describing his psychology in a couple of brief remarks, categorizing him, and dispensing with him. According to Roback, "Edwards takes it for granted that there are only two departments of the mind: (1) understanding, or as we would call it, cognition (2) volition and affection."⁵¹

Fay agrees with Roback: "Edwards follows the scholastic division of mental operations into cognitive and appetent."⁵² In classifying Edwards' psychology as "scholastic," Roback and Fay deny, in effect, that Edwards upheld the unity or integrity of the self. The Puritan version of Thomistic psychology had the human mind (or soul) divided into separate, interacting, but functionally autonomous entities. This was especially true of the intellect and the will.⁵³ Even today, psychologists speak of emotional people

⁵¹ Roback, History, pp. 46-47.

⁵² Fay, American Psychology, p. 43.

⁵³ Norman S. Fearing, "Will and Intellect in the New England Mind," William and Mary Quarterly, 1972, 24, 515-558. This is a valuable article. It contains the only systematic attempt to point out the many psychological similarities between Edwards and Augustine. Yet Fearing, like the other commentators, draws a too simplistic picture of Edwards (and Augustine's psychological views), claiming that Edwards and

or rational people, but few would claim, as did the Puritans, that the sources of these human expressions are physiological globules called "reason" and "will." They would not hold, with many scholastic Puritans, that there are acts which are purely rational or purely emotive.⁵⁴ Roback and Fay place Edwards squarely in the Aristotelian-Thomistic tradition.

All people, and especially scholars, love to "explain" via classification. Since Adam, men have felt vaguely uncomfortable in the presence of a phenomenon until they have named it. Scholastic and Kantian psychological categories still exert a tremendous influence on psychological thought, and ethologists have renewed the old pastime of categorizing organisms according to their instincts. A number of historians, however, the vast majority of recent Edwards scholars, believe that Edwards was one of those rare thinkers who chose to remain uncomfortably ambiguous rather than apply artificial, scholastic-like distinctions to the human mind.⁵⁵ Yet in his

Augustine merely emphasized will (and emotions) while others, from Aquinas to Chauncy, emphasized intellect. See Chapters 3 and 4 for a treatment of these men and their psychological theories in a very different context.

⁵⁴Cf. Albert Ellis, Reason and Emotion in Psychotherapy (New York, 1962), Peter Lindsay and Donald Norman, Human Information Processing (New York, 1972), Chapter 17.

⁵⁵Those who would agree that Edwards avoided a scholastic-like dichotomization of the mind include Perry Miller, Jonathan Edwards (New York, 1949) and "Jonathan Edwards on a Sense of the Heart," Harvard Theological Review, 1948, 41, 123-145; Douglas J. Elwood, The Philosophical Theology of Jonathan Edwards (New York, 1960); Roland Delattre, Beauty and Sensibility in the Thought of Jonathan Edwards (New Haven, 1968); Conrad Cherry, The Theology of Jonathan Edwards (New York, 1966); Faust and Johnson, Selections; Alan Heimert,

attempt to preserve the unity of the mind Edwards faced an insurmountable difficulty. The very language he used to express himself was the disjunctive terminology of faculty psychology. Puritan psychological theology had always emphasized either the reason or the volition in conversion in spite of the conviction that the whole man must obviously be involved. Conrad Cherry mentions, for instance, Thomas Shepard as a proponent of the reason and William Ames as an advocate of the will.⁵⁶ Cherry describes Edwards' dilemma this way:

Edwards was thus handed by his theological forbears a clear effort to account for personal unity in the act of faith, but he was also handed a way of accounting for that unity which continually frustrated the effort. With man so divided into distinct faculties, the temptation was to describe the nature of the faith-act in terms of their distinct operations rather than in terms of the unity of the human subject.⁵⁷

The "way" referred to by Cherry is, of course, the doctrine of the separate faculties. It is clear that few could resist the temptation to break down the mind of man into distinct parts and to emphasize the importance of one or another of these quasi-mythological entities. Whether or not their readership agreed with them was, in a sense, unimportant. At least writer and reader understood each other.

Religion, and introduction to Heimert and Perry Miller, eds., The Great Awakening (New York, 1967); Haroutunian, Piety Versus Moralism; Conkin, Puritans; and John E. Smith, "Editor's Introduction" to Edwards' Treatise on the Religious Affections (New Haven, 1959).

⁵⁶Cherry, Theology, pp. 12-13.

⁵⁷Ibid., p. 14.

There have been a few thinkers, however, who have resisted the temptation to partition man and hence have never been clearly understood. Augustine and Locke are two of these brave ambiguous who were important influences upon Edwards.⁵⁸ The doctrines of Augustine had always been an important part of Puritan piety and he came to Edwards' special attention through the writings of a Dutch theologian, Peter van Mastricht.⁵⁹ Augustine held that the rational and emotive capacities operate in a unified, inseparable fashion.

For there are some things which we do not believe unless we understand them, and there are other things which we do not understand unless we believe them.

. . . Our understanding therefore contributes to the comprehension of that which it believes, and faith contributes to the belief of that which it comprehends.⁶⁰

Locke, whose terminology is to be found throughout Edwards' works, also registered his objection to an artificially-dichotomized human mind. In a famous passage he sarcastically remarked:

⁵⁸The issue concerning the nature of Edwards' principle sources is a large and complex one. Those who view Edwards' sources as biblical or church oriented generally view Edwards as a Medieval man. Others, particularly Perry Miller, feel that Edwards' greatest debt is to Locke and Newton. The "Medievalist" viewpoint is forcefully advanced by Vincent Tomas in "The Modernity of Jonathan Edwards," New England Quarterly, 1952, 25, 60-84. The "modernist" interpretation is in Miller, Jonathan Edwards.

⁵⁹Peter von Mastricht, A Treatise on Regeneration. Extracted and translated from the Theologia Theoretico-Practica (New Haven, 1770).

⁶⁰Aurelius Augustine, Enarrationes in Psalmos, CXVIII, Sermones XVIII, 3, quoted in Elwood, Philosophical Theology, p. 113.

For, if it be reasonable to suppose and talk of faculties as distinct beings that can act, (as we do, when we say the will orders, and the will is free,) it is fit that we should make a speaking faculty, and a walking faculty, and a dancing faculty . . . And we may as properly say that it is the singing faculty sings, and the dancing faculty dances, and that the will chooses or that the understanding conceives.⁶¹

Locke, and later Edwards, reduced the ponderous list of faculties to two, understanding and will, which Locke viewed as interacting processes rather than as structural entities.⁶²

The group of scholars who believe that, to Edwards, the mind is an integrated rational-emotive unity generally portray Edwards' attempt to express this unity as a little more comprehensible than Augustine and a little less comprehensible than Locke. One theologian has stated that:

He [Edwards] agreed with Locke that we should not attempt to divide the mind into separate compartments, but simply recognize the several interacting mental processes. But Edwards perceived more than this. He saw an aesthetic element in every act of understanding as well as a cognitive element in every act of will.⁶³

That is, Edwards went beyond Locke to Augustine in asserting that mental processes do not only interact but they are rational and emotional components of a superordinate, unified mental process.

While Augustine's vision is incisive and vast, his explanations are intuitive rather than explicit. Most

⁶¹ John Locke, An Essay Concerning Human Understanding, 2 vols, ed. by A. C. Fraser (New York, 1959), II, xxi, 17.

⁶² Locke, Essay, II, xxi, 6.

⁶³ Elwood, Philosophical Theology, p. 114.

scholars give Edwards credit for at least trying to explain what he meant. Edwards called the end product of this unified process "a sense of the heart."

I say, a sense of heart; for it is not speculation merely that is concerned in this kind of understanding: nor can there be a clear distinction made between the two faculties of understanding and will, as acting distinctly and separately, in this matter. When the mind is sensible of the sweet beauty and amiableness of a thing, that implies a sensibleness of sweetness and delight in the presence of the idea of it.

And yet there is the nature of instruction in it; as he that has perceived the sweet taste of honey, knows much more about it, than he who has only looked upon and felt of it.⁶⁴

Ultimately, however, Edwards' concept of "a sense of the heart" is not more useful than Augustine's complete reliance on the intuitive powers of his reader. Edwards is rigidly confined to the faculty language. All the "taste" metaphors imaginable do not obviate the fact that "heart" is a simple synonym for will-affections, a disjunctive structural unit. Metaphors are useful only for providing an intuitive understanding of explicit explanations. Without those explanations, understanding will never be more than intuitive and conjectural.

Until now, no scholar has made a serious attempt to rescue Edwards from his quandary. To Roback and Fay, of course, Edwards is in no dilemma; he fits neatly into the traditional faculty mold. This view, however, is very superficial and, as we shall see in chapter 5, wrong. Historians

⁶⁴ Jonathan Edwards, A Treatise Concerning the Religious Affections, ed. by J. E. Smith (New Haven, 1959), p. 272.

who know Edwards have concluded that his vision of a unified mind does not at all fit the faculty mold. What mold, then, does the unified view of Edwards fit?

Does Edwards represent a Whorfian situation in which the language of psychology is devoid of concepts which might be used to explicate Edwards' ideas?⁶⁵ Or is the present psychological system a function of historians' failure to notice that Edwards is part of a select but old tradition in psychology, and that a relatively more precise and suitable language now exists to describe that tradition of psychological thought? The latter is more likely.⁶⁶ Even the convoluted, metaphorical brilliance of Perry Miller fails to shed any light on the topic:

In Edwards' "sense of the heart" there is nothing transcendental; it is rather a sensuous apprehension of the total situation. And what makes an idea in the total situation important for man, as the idea taken alone can never be, what makes it in that context something more than an inert impression on passive clay, is man's apprehension that for him it augurs good or evil. It is, in short, something to be saluted by the emotions as well as by the intellect.⁶⁷

Miller, and this is true of the other historians, says nothing that Edwards himself does not say. What is meant to be explanation is only paraphrase.

⁶⁵ Benjamin Lee Whorf, Language, Thought, and Reality (Cambridge, Mass., 1956).

⁶⁶ See chapters 3 and 4.

⁶⁷ Miller, "Sense of the Heart," p. 127.

Man: Proactive, Reactive, or Both?

In 1949 Perry Miller, though hardly a mathematician, derived an equation which cast Edwards' scholarship into a state of immediate confusion and controversy. Among the many remarkable contentions in his "intellectual" biography of Edwards, Miller claimed that, psychologically speaking, Edwards equals Locke.

The mind of Edwards . . . was trained by the doctrine of New England, in which it had always been held that man is passive in the reception of grace and that he is bound to sin if he tries to earn salvation by his own efforts or on his own terms. Was it not precisely here that the new metaphysics and the old theology, the modern psychology and the ancient regeneration, came together in an exhilarating union? The whole reach of the vision unfolded before Edwards as he read Locke's innocent observation that simple ideas, "when offered to the mind, the understanding can no more refuse to have, nor alter when they are imprinted, nor blot them out and make new ones itself, than a mirror can refuse, alter, or obliterate the images or ideas which the objects set before it do therein produce."

The empirical passivity became for Edwards, in the context of eighteenth-century New England, not an invitation to lethargy, but a program of action.⁶⁸

Miller was a historical missionary who spent much of his career trying to convince his readers that New England colonial religious thinking is "modern" rather than "medieval." Thus Miller holds that much of the thinking of the seventeenth century New England theologians can be traced to European Renaissance Neo-Platonism and that Jonathan Edwards, the greatest Puritan, derived his world view from Newton and his psychological views from Locke, "the father of modern

⁶⁸Miller, Edwards, p. 57.

psychology."⁶⁹ There is a sense in which Miller is justified in asserting that Locke is "the father of modern psychology." Locke's central doctrine, his picture of man presented in the Essay, is that of a passive, reactive creature who merely responds to impinging stimulation. The mind, to Locke, is like a sheet of "white paper" which is written upon by "EXPERIENCE."⁷⁰ The "simple ideas" were said to be products of the reactive association of incoming sensations.⁷¹ In some respects a strict "tabula-rasa" associational interpretation of Locke is a caricature of his thought.⁷² Yet it was this view of man that passed from Locke to the British Empiricists (or associationists), to Wundt and into the early psychological laboratories of Germany and America, and perhaps even to B. F. Skinner.

⁶⁹ Ibid., p. 72.

⁷⁰ Locke, Essay, II, i, 2.

⁷¹ Ibid., II, xxxiii.

⁷² Locke's chapter on the association of ideas was not added to the Essay until 1700, in the fourth edition; thus it may be treated, as Watson puts it, merely "as an appendix to the rest of his thinking" (The Great Psychologists, p. 187). And, of course, Locke had a great deal to say about the manner in which the mind actively constructs complex ideas; cf. Essay, II, xxii, 2, and II, xiii. Edwards, however, seems to have extracted from Locke only the latter's passive sensationalism. We shall see in chapter 5 that Edwards' proactive position goes much further than Locke's admission that the mind reflects on data derived through the senses. Edwards held that the selective capacity of the "active powers" of the mind actually determines which information is eventually processed. It seems much more plausible to attribute this Edwardsean principle to the Augustinian tradition rather than Locke.

In part, William James dedicated his opus to demonstrating the superficiality of the "'associationist' schools" who

seek common elements in the divers mental facts rather than a common agent behind them [such as a "faculty"], and to explain them constructively by the various forms of arrangement of these elements, as one explains houses by stones and bricks.⁷³

Clearly, James chose not to conceive of man as an inert "house" composed of substances which were merely applied by some external force.

Where did Edwards stand on this crucial issue? On the one hand is a group of scholars who follow Miller's assertion that "he [Edwards] adopted the sensational psychology with a consistency that outdoes the modern behaviorist."⁷⁴ Faust and Johnson, for example, maintain that neither the "will" nor the "understanding" described by Edwards is capable of initiating any sort of physical or mental activity. While the imposition of the discrete faculty constructs upon Edwards' system is erroneous (see previous section), their intent is clear. They wish to prove that Edwards followed Locke in asserting that man is a passive lump of clay. They maintain that Edwards held, with Leibniz and Locke, that the mind is moved by the strongest motive:

Edwards was obviously anxious to exclude any notion of independent activity on the part of the will. As he saw it, the will was purely passive.⁷⁵

⁷³James, Principles, I, p. 1.

⁷⁴Miller, "Sense of the Heart," p. 124.

⁷⁵Faust and Johnson, Selections, p. XLVI.

Moreover,

. . . in Edwards' view the understanding, dependent as it was upon the senses--natural and supernatural--, was purely passive.⁷⁶

Thus a verbal picture is painted of a man whose actions in the world and his perception of it are totally a function of external events.

Much of the case for the Edwards-Locke psychological equation rests upon Edwards' adoption of some Lockean terminology. Most importantly, Edwards sometimes referred to the presence of the divine and Supernatural light of the Holy Spirit as a "new simple idea."⁷⁷ To Locke, a "new simple idea" represented the culmination of a passive process, and it is assumed that Edwards adopted Locke's essential meaning along with the terminology. Thus Edwards is said to have conceived of the conversion experience as a completely passive reception of the Spirit. Although the topic is still a matter of some conjecture, it seems clear that Edwards viewed the faith-act as the prototype of all human perceptual acts rather than as an experience which required a unique "super-

⁷⁶Ibid., p. xlvii.

⁷⁷For instance:

I say, if God produces something thus new in a mind, that is perceiving, thinking, conscious thing; then doubtless something entirely new is felt, or perceived, or thought; or which is the same thing, there is some new sensation or perception of the mind which is entirely of a new sort, and which could be produced by no exalting, varying or compounding of that kind of perceptions or sensations which the mind had before; or there is what some metaphysicians call a new simple idea. [italics mine]

Edwards, Affections, p. 205.

natural" sense.⁷⁸ The proponents of the Edwards-Locke equation may therefore defend the position that Edwards was, in all essential respects, a Lockean who merely happened to focus his attention on a particular kind of perceptual act, the conversion experience.

No one would deny Edwards' emphasis on man as a reactive, passive creature. In the Calvinist scheme of things nobody has the wherewithal to save himself. "God . . . holds you over the pit of hell," Edwards preached in the bone-rattling sermon for which he is best known, "and yet it is nothing but His hand that holds you from falling into the fire every moment."⁷⁹ It is obvious that a psychological doctrine which emphasized man's passivity, such as Locke's, would hold tremendous appeal to a Calvinist predestinarian like Edwards. Yet, perhaps surprisingly, a number of scholars see in Edwards a somewhat muted emphasis on man's active perceptual abilities in addition to the obvious Lockean passivity. Although they have experienced great difficulty in expressing

⁷⁸ Some scholars believe that the conversion experience, in Edwards' view, involved a perceptual process which is qualitatively different from that used in mundane perception. Some hold the opposite view; that Edwards' saw no qualitative differences between the perceptual apparatus' supernatural and natural perception. The former viewpoint is expressed in Paul Helm "John Locke and Jonathan Edwards: A Reconsideration," Journal of the History of Philosophy, 1969, 8, 51-61; the latter view may be found in Cherry, Theology, pp. 27-33. The bulk of the evidence supports the latter view (see chapter 5).

⁷⁹ "Sinners in the Hands of an Angry God"; sermon preached at Enfield, Conn., July 8, 1741. In S. E. Dwight, ed., The Works of President Edwards, 10 vols. (New York, 1830); v. 7, pp. 163-177.

the precise manner in which Edwards conceived man as both active and reactive, each of these commentators rejects the view that Edwards' psychology can be reduced to that of Locke.

Commentary on the thought of Edwards has gone through a number of phases. During his own lifetime his contemporaries seemed most interested in his emphasis on emotional religion. Later, from 1770-1850, many theologians argued over how to counter Edwards' formidable defense of determinism. Around the turn of the twentieth century, interest centered on the origins of Edwards' early "idealism," especially upon whether or not he had read Berkeley. At approximately the same time, in 1889, A. V. G. Allen offered the first, and in many respects still the most successful, attempt to describe Edwards' psychological views.⁸⁰ According to Allen,

What we call psychology was to him [Edwards] an unknown science, and yet no modern psychologist could have laid more stress upon the importance of observing the different phases of human experience. In this study, his conception of inspiration or revelation enabled him to move with perfect freedom. The same spirit which clarified the vision of apostles or prophets was now illuminating the minds of the common people with a divine supernatural light.⁸¹

This statement was made the year before the appearance of James' watershed Principles, before "psychology" began to be equated, by most educated persons, with the experimental endeavors of the German, Wundt, and his American disciples. Allen himself, like Edwards, could "move with perfect freedom"

⁸⁰ Allen, Jonathan Edwards.

⁸¹ Ibid., p. 144.

in conceiving a system of psychology ("the different phases of human experience") existing within and augmenting a large theological superstructure ("his conception of inspiration or revelation"). This approach is very similar to Brett's, especially the manner in which Brett extracts psychological ideas from what he calls the "Christian, Ethico-Religious Tradition."⁸²

Allen was, of course, aware of Locke's influence upon Edwards, but he minimized its importance. The commentary of Allen was written long before Perry Miller had formally stated the Edwards-Locke psychological equation.

The intellectual impulse came from the philosophy of Locke, whose Essay on the Human understanding Edwards read when he was but fourteen years old. The impression it left upon his mind was a deep and abiding one. But even in his early adherence to the sensational philosophy he was still himself, independent, accepting or rejecting in accordance with an inward dictum which sprang from the depth of his being. Locke was after all the occasion rather than the inspiring cause of his intellectual activity. Had he read Descartes instead, he might have reached the same conclusion.⁸³

This is a remarkable contention when one considers that the Lockean tabula rasa and Cartesian innate ideas are usually placed at opposite poles.⁸⁴

Although Allen's conception of psychology is vague, it is clear that he saw in Edwards' psychological system a

⁸²Brett, History (Peters, ed.), chapter VII.

⁸³Allen, Edwards, p. 5.

⁸⁴Cf. Watson, Great Psychologists, pp. 135-216 and Richard Lowry, The Evolution of Psychological Theory (Chicago, 1971), pp. 5-23. Miller also speaks of the "Lockean victory over innate ideas" ("Sense of the Heart," p. 125).

view of man which included far more than the Lockean lump of clay. In each of its two phases the conversion experience was said to consist of both reaction to the divine light and self-initiated action on the part of the convert. Allen calls Edwards' first phase "the tragic element in the process" or "the realization of an awful danger and the importance of speedy escape."⁸⁵ Allen contends that Edwards' view of this stage of awakened consciousness "appeared like a great struggle with some hostile power, as of a serpent disturbed or enraged."⁸⁶ A struggle is hardly a passive reception of anything; it connotes activity of the most vigorous sort. Not only must the devil be actively discouraged, however, but the Spirit must be actively encouraged. In the second stage of awakening, one must perceive his own impotence and a need for divine mediation. The struggling convert's eventual regeneration is, of course, dependent on God's merciful infusion of his Spirit; in that respect, man is passive. Yet God treads only where he is made welcome. As Allen reads Edwards, "we get a confused picture in which the consciousness of sin in the sight of God leads the sufferer in various ways to seek relief."⁸⁷

The "confused picture" derived from Edwards by Allen demonstrates remarkable honesty as well as insight. Allen,

⁸⁵ Allen, Edwards, pp. 144-145.

⁸⁶ Ibid., p. 145.

⁸⁷ Ibid., p. 146.

and many others, have been bewildered by Edwards' apparent attempt to show that man is both proactive and reactive in the act of faith; that he is and is not instrumental in his own conversion. Edwards did not state his case clearly and neither have his commentators.

Allen wrote in 1889 and, in a sense, his task was relatively easy. He did not have to contend with Perry Miller and the Edwards-Locke equation. Arguing with Perry Miller can be very difficult and frustrating indeed. There is an argumentative edge combined with a Madison Avenue erudition in much of Miller's work that can produce a streak of caution in even the boldest scholar.⁸⁸ Recently, however, Miller's Edwards-Locke psychological equation has begun to be qualified, most importantly by Claude A. Smith.⁸⁹ It is Smith's stated purpose to "advance the discussion of Edwards' relation to the thought of Locke a step beyond the treatment accorded it by Perry Miller" by showing that "Edwards was

⁸⁸In what may be the most balanced evaluation of Miller yet published, Peter Gay (A Loss of Mastery) openly concedes Miller's greatness as a historian while lamenting his tendency to over-write, and his "overly" fertile mind. Yet Miller's brashness, his bullish approach to writing and his often indiscriminate ejaculation of ideas onto the printed page, were born of necessity. He almost singlehandedly revived Puritan scholarship and, in the process, gave it a thousand new directions.

⁸⁹Claude A. Smith, "Jonathan Edwards and 'the Way of Ideas,'" Harvard Theological Review, 1966, 59, 153-173.

See also the following for a reassessment of the relationship between Edwards and Locke in other contexts: Leon Howard, ed., "The Mind" of Jonathan Edwards": A Reconstructed Text (Berkeley, Calif., 1963); Edward H. Davidson, "From Locke to Edwards," Journal of the History of Ideas, 1963, 24, 355-372; and Jonathan Edwards: The Narrative of a Puritan Mind

forced to go beyond Locke's analysis, in order to do full justice to the richness of his experience.⁹⁰ In Smith's view, Edwards saw man as considerably more than tabula rasa; the mind had active as well as passive powers. It was obvious to Edwards, according to Smith, that neither our perception of the natural nor the supernatural is a function of random glances. There are, as Edwards put it, "rules of harmony and regularity" that may be observed in all perceptual acts.⁹¹ In other words, perception is selective. Conrad Cherry, who finds the sources of Edwards' psychology in Solomon Stoddard and Augustine as well as Locke, describes Edwards' concept of perception rather cryptically as "active receiving."⁹²

Did Edwards follow Locke all the way or didn't he? Those who agree with Miller say that he did and that Edwards thus conceived of man as a simple, passive creature, waiting patiently to be written upon by the pen of God directly, or indirectly by the constituents of God's universe. For those who have sought to qualify the Edwards-Locke psychological equation, either before or after it was formally written, the task of characterizing Edwards' psychology is not so easy.

(Boston, 1966); Paul Helm, "Locke and Edwards," in Helm, ed., Treatise on Grace and Other Writings (Cambridge, England, 1971).

⁹⁰Smith, "Way of Ideas," p. 154.

⁹¹Jonathan Edwards, "Notes on the Mind" (No. 1), in Harvey G. Townsend, ed., The Philosophy of Jonathan Edwards from His Private Notebooks (Eugene, Ore., 1955), p. 26.

⁹²Cherry, Theology, p. 19.

It is one thing to say that Edwards went beyond Locke, but quite another to explain where, exactly, he went. The problem is very similar to that faced by those who characterize Edwards' view of man as a rational-emotive unity. In each case, attempts to explain Edwards' view of man have resulted in redundant paraphrase. Allen maintains that "needs" are related to the perceptual "struggle," Smith talks of "rules" that govern the process, and Cherry speaks paradoxically of "active receiving." The complexity of Edwards' thought requires that his view of man be characterized as a rational-emotive unity and as both proactive and reactive. But this is speaking in riddles. What is needed is a believable psychological model that will incorporate each pair of seeming polar opposites into a coherent scheme. Edwards didn't have one and neither have his commentators, but one is needed to unravel Edwards, the psychological paradox.

The Problem of Interpreting Edwards' Psychology

The problem of describing Edwards' psychological views is indeed a difficult one for those commentators who have failed to carefully construct an appropriate historical scheme of psychology into which Edwards can be inserted. The consensus is that Edwards was not a faculty psychologist who postulated mythical constructs in an effort to explain human behavior. Likewise, there is a rising tide of scholarly opinion which holds that Edwards somehow transcended the

traditional proactive-reactive dichotomy and viewed human perception as some sort of active-receiving. Much comment on Edwards' psychology has, therefore, resulted in a sterile admiration of his uniqueness. We know that he disagreed with the psychological views of his contemporaries to such an extent that he experienced great difficulty in expressing himself intelligibly. The essence of Edwards' psychology, and most have agreed intuitively that the essence is very profound, must remain a mystery until an implicit adoption of Brett's human nature approach to the history of psychology is transformed into explicit principles, and until a model of human behavior is provided which can incorporate the paradoxical Edwardsean concepts into a coherent unity.

One may wonder, in light of all the confusion and ignorance concerning Edwards' psychological system, why anyone would try to interpret his psychology. Why, in other words, would a scholar be inclined to try to place Edwards in the overall perspective of the history of psychology and to compare his views with modern, non-theological psychologists. The answer lay somewhere in the confidence, or foolhardiness, of otherwise competent scholars who are blissfully ignorant of the precise nature of Edwards' views and of twentieth-century psychology. They have been free to rely upon their creative imagination to produce farfetched analogies with little fear of criticism from their colleagues who, like themselves, know little of the ground from which the analogies have been fetched.

Consider Perry Miller. His position as the pre-eminent Puritan scholar is universally acknowledged and, although his writing was often brash, argumentative, and one-sided, he usually based his arguments on extensive data. In his interpretation of Edwards' psychology, however, Miller extends his claims far beyond what the data, or even the reader's imagination, will allow. In his controversial "intellectual" biography of Edwards, Miller's affection for mysteries takes on an almost pathological intensity. Strangeness is everywhere; Edwards never meant what it seems he meant. Hidden meanings abound.

So his second publication ["A Divine and Supernatural Light . . ."] like his first-and his last-contains an exasperating intimation of something hidden. There is a gift held back, some esoteric divination that the listener must make for himself. Edwards' writing is an immense cryptogram, the passionate oratory of the revival no less than the hard reasoning of the treatise on the will.⁹³

Although the language is excessively dramatic, the message is sound. This essay represents an attempt to translate the psychological aspects of the Edwardsean "cryptogram." Despite this confession of ignorance, however, Miller later can claim that

. . . though he defeated himself by employing the very term ["faculty"] he repudiated, his thought was tending, as fast as any in the eighteenth century could, toward conceiving reason itself, or even logic, as an image of temperament; it would have taken him about an hour's reading in William James, and two hours in Freud, to catch up completely.⁹⁴

⁹³Cherry, Theology, p. 19.

⁹⁴Ibid., p. 183.

Miller was fond of comparing Edwards with Kierkegaard, and it appears that, following the dictum of the Dane, Miller himself has taken a "leap of faith." The evaluation of this claim depends on Miller's (and the reader's) intuitive feel for the nature of psychology and its history, Edwards' psychological views, and those of James and Freud. What is psychology? What did James or Freud say that can be directly compared and contrasted with Edwards' (admittedly cryptogrammatic and therefore not fully comprehensible) psychological theory? These questions have no answers, of course, until the views of each theorist are translated into a common language of the relevant dimensions of human nature, and until the understanding of Edwards' views comes to depend less on faith than on an explicit model.

Miller would have Edwards become a precursor of Jamesian or Freudian psychology but, characteristically, he left the detailed investigation of the truth of this assertion to "future research." It is almost certain that some budding scholar will in the future, or perhaps has already begun, to study the Jamesian or Freudian aspects of Edwards' thought. Miller's esoteric vices are often, at the same time, heuristic virtues.

The other significant attempt to interpret Edwards' psychological theory within the context of the history of psychology lies poles apart from Miller's ambiguity. To Joseph Haroutunian, Edwards was no Jamesian or Freudian, but a behaviorist, and unlike Miller, Haroutunian offers a

detailed explanation of his interpretation.

A modern rendition of this analysis of Edwards is the study of human behavior in terms of "stimulus" and "response." A stimulus is Edwards' "motive," and response is volitional behavior. Such a study is based upon the principle that where there is no stimulus, there is no response; where there is no action, there is no reaction; where there is no cause, there is no effect. The nature of a given stimulus is irrelevant to the fact that it acts as a stimulus. An "S-R bond" may be physical or it may be moral, and in both cases it is a "certain connection" between a "motive" and an act of volition. Edwards' metaphysical principle of necessity is the modern methodological principle that all action is reaction. The excellence of Edwards' thought consists in that he withstood a careless attribution of mental functions to underlying quasi-physical structures or entities (which is also the virtue in behaviorism), and did not commit the fallacy of reducing one function into another, the mental and moral into the physical (which is the vice of modern behaviorism as understood by the "vulgar"). The will is neither a "faculty," nor an uproar in the cells of a muscle or a gland. Volition is not caused by⁹⁵ the will, because there is no will to cause such an act.

This is an extremely complex statement and it requires careful examination. First it is asserted that Edwards is a behaviorist. Why? Because of his ruthless hard determinism: "where there is no cause, there is no effect." Clearly, Haroutunian equates behaviorism and determinism. Perhaps, in 1932 when Haroutunian wrote, behaviorism was so dominant in America that he could not see, for instance, that Freud, surely no behaviorist, was also holding that all effects have causes. The chief difference between behaviorists and most other more cognitively-oriented psychologists is not relative adherence to hard determinism. The widest gulf separating behaviorists and other scientific psychologists concerns

⁹⁵ Piety Versus Moralism, pp. 225-226.

reductionism. Behaviorists have always been hesitant to speculate upon or postulate the existence of definable mental operations.⁹⁶ Observable behavior, they claim, is the object of their analysis. Many psychologists, including Freudians, functionalists, and Gestaltists, have objected to this stimulus-response psychology; i.e., that the mind is not a fit topic for respectable scientific research. E. C. Tolman expressed the principle objection to S-R behaviorism very cogently back in the thirties.⁹⁷ Of course, all behavioral events are caused, he readily admitted; every response has a stimulus. But this simple S-R level of analysis, though convenient, is too simple. The organism effectively intervenes between stimulus and response. The behavioral sequence is thus S-O-R, the "O" standing for "organism." The observable response, to Tolman, is a function not only of some specifiable stimulus complex, but also of an individual's assumptions, expectations, and purposes concerning the stimuli.⁹⁸ Tolman, and

⁹⁶At least since John B. Watson's behaviorist manifesto, "Psychology as the Behaviorist Views It," Psychological Review, 1913, 20, 158-177.

⁹⁷E. C. Tolman, Purposive Behavior in Animals and Men (New York, 1932).

⁹⁸A typical demonstration used by cognitive psychologists to refute the behaviorist "theory" of mind is as follows:

- | | | | | |
|----|----|----|----|----|
| 1. | 12 | 13 | 14 | 15 |
| 2. | A | 13 | C | D |

Normally, item No. 2 in line 1 is perceived as a "thirteen," while item No. 2 in line 2 is perceived as the letter "B." Why are identical stimuli perceived differently? Because, it is argued, a person reading line 1 does not have the same expectations and assumptions as the person reading line 2. Behaviorists do not usually speak of expectations

other cognitive psychologists, believe that responses are constructed within the organism based upon the information present in the stimuli and upon what the organism is looking for.

Cognitive psychologists, then, may be characterized by their willingness to speculate about mental functioning while behaviorists tend to view the organism as empty-headed. Certainly, in this context, Edwards is no behaviorist, in spite of his uncompromising determinism. Indeed, much of the secondary commentary on Edwards consists in trying to restate his voluminous, yet vague and unsuccessful, attempts to explicate the mental functioning which occurs during the conversion experience. In groping for a contemporary label for Edwards' psychological views, Haroutunian picked the wrong one. Edwards simply lacked the reductionistic mentality that would permit classifying him as an eighteenth-century behaviorist. After all, Edwards' first serious philosophical endeavor, undertaken while a young teenager, was entitled Notes on the Mind.⁹⁹ The idealistic metaphysics contained in this early work would provide nothing but profound embarrassment to an aspiring behaviorist.

Haroutunian's naive conception of modern behaviorism leads him directly to contradict himself in a curious manner. Edwards, he states, "did not commit the fallacy of reducing

and assumptions because, of course, they are not "behaviors" and cannot be observed directly.

⁹⁹In Townsend, Philosophy, pp. 21-73.

. . . the mental and moral into the physical." Therefore, Edwards is not a reductionist. It is obvious to Haroutunian, an excellent church historian, that Edwards' tracts and pamphlets are packed with discussions of mental and moral "faculties," regardless of what he might have meant by the term. Edwards, the S-R behaviorist, therefore, is no behaviorist at all. He does not concentrate strictly, or even primarily, upon "the physical," or what modern behaviorists call "observables." Haroutunian, in effect, offers a sound interpretation of Edwards as a cognitive psychologist, while maintaining all along that he is a behaviorist.

CHAPTER III

ON SCIENTIFIC HISTORY AND EDWARDS' PLACE
IN THE HISTORY OF PSYCHOLOGY

Imagine the following situation aboard a Spanish galleon in the sixteenth century: The purpose of the voyage is to search for villages along the Central American coast which might have gold in their possession. Land has been sighted, and the captain, along with his first and second mates, begins to investigate the land through his telescope. This is the first mission for the second mate, and he has inadvertently inverted his spyglass. He reports that he sees what appears to be a city made up of a few buildings --he cannot determine how many. He can only guess that the "city," if it is a city, does not look much like Barcelona, where he comes from. The captain, meanwhile, is also observing the land through his own telescope, which he is holding correctly in aristocratic fashion. He is overwhelmed. He reports seeing a massive civilization, huge buildings, people of many races and great sailing ships. The captain goes to his cabin where he lies down and listens to the palpitations of his racing heart. The first mate realizes that his captain is in a state of shock. He thus races to the bridge with telescope held correctly but nervously in hand. He cannot find words to describe what he sees, but he notices another,

less impressive city beyond the one that forced his captain to retire. Although he is incapable of describing either settlement, he does record a few comparisons between them: One is taller, the other brighter, etc. Each of the three observers returns home to Spain confident that his pseudo-description of the unexplored territory is the correct one. After listening to the three views of the city, the confused king decides to make the next voyage himself.

Like the mythical city, Edwards' psychological theory has been the object of three types of fallacious inquiry. Roback and Fay have inverted their historical telescope. They assume, a priori, that the dimensions and concerns of twentieth-century psychology are ultimate criteria for the description and evaluation of psychological views. Thus they only skim the surface of Edwards, making a few evaluative statements based on how closely he seems to approximate a poorly-defined concept of modern psychology. This approach to Edwards' psychology has resulted in an analysis which is narrow, shallow, and totally unacceptable. It is an example of the presentist fallacy in which the past is studied for the sake of the present.¹ Edwards is not a twentieth-century psychologist. That, in essence, is the message of Fay and Roback.

¹The connotations given to "presentism" [and "historicism"] are derived from George W. Stocking, who attached these labels to two broad historiographic positions outlined by Herbert Butterfield in his Whig Interpretation of History (London, 1931); See Stocking, "On the Limits of 'Presentism' and 'Historicism' in the Historiography of the Behavioral Sciences," Journal of the History of the Behavioral Sciences, 1965, 1, 211-217. Many different labels have been attached

A very different approach is taken by Edwards specialists, especially Perry Miller. They assume that everyone knows intuitively what psychology is and thus it is perfectly all right to overwhelm the reader with claims about Edwards' "psychology." Their historical telescope works too well. The result is voluminous speculation about Edwards' psychology, and a deluge of detail offered in support of those speculations, neither of which can be evaluated in the absence of an explicit psychological criterion. Although these historians assume, albeit implicitly, for the most part, a sensible Brett-Human-Nature approach to the history of psychology, no attempt is made to point out Edwards' view concerning relevant dimensions of man's complex nature. Textual exegesis is thought to be adequate. This is an unfortunate attitude, and it is an example of the historicist fallacy, or studying the past for the sake of the past.² Alan Heimert claims, for instance, that "The central conflict of the Great Awakening was thus not theological but one of opposing theories of the human psychology."³ Yet until the nature of psychology, and thus of a psychological controversy, is clarified for twentieth century readers, such statements are meaningless.

The commission of the presentist and historicist fallacies implies that the historian's telescope into the past

to these two modes of historical inquiry, but I will use Stocking's terminology throughout.

²Stocking, "'presentism' and 'Historicism.'"

³Alan Heimert and Perry Miller, eds., The Great Awakening (New York, 1967), p. xxxix.

is out of focus. The presentists are nearsighted; their narrow attempts to assimilate the past to some amorphous contemporary rubrics effectively blinds them to much of what the past has to offer. The historicists are farsighted; although they are deeply immersed in many aspects of the past, they lack the ability to interpret their findings to a contemporary audience. In general, presentists' comments upon the psychology of Edwards demonstrate a substantial, though implicit, awareness of psychology, but an inadequate knowledge of Edwards. Historicists' evaluations of Edwards' psychology, on the other hand, show familiarity with Edwards and ignorance of psychology.

The historicists face yet another difficulty which is not a problem for the presentists. Edwards was content to formulate his psychological theory in the language of Calvinism and scholastic faculty psychology.⁴ Presentists tend to perceive only the formal linguistic aspects of Edwards, such as his discussion of "faculties," and thus they see few essential differences between the psychological views of Edwards and those of his contemporaries. Historicists, however, deny that Edwards was a faculty psychologist and they have noted what appear to be two extraordinary complications in his theory: Man is always and at once a rational-emotional unity,

⁴Perry Miller has remarked that Edwards "was entirely satisfied to express himself, so far as content goes, in the received tenets of Calvinism" "He was an artist working in a tradition, and for him the tradition was sufficient," Miller, Jonathan Edwards, pp. 47-48.

and he is both proactive and reactive. The historicist's problem is this: how to present these complications as something other than contradictions in a comprehensive scheme that makes sense. This difficulty has proven to be insurmountable because the historicists lack a psychological model which can accommodate the Edwardsean polarities. Instead of attacking the problem, the historicists have merely circumscribed it by committing what I shall call the negativist fallacy. They assume, in effect, that because we know what Edwards did not say--that his psychology was not that of his contemporaries--we therefore know and understand what he actually said and what the implications of those statements are.⁵ Edwards himself, working within the self-imposed restrictions presented by the faculty-psychology terminology, could often do no better than explain what he did not mean.⁶ The negativist fallacy, therefore, has usually taken the form of paraphrasing Edwards' original negativisms.⁷ In this respect, the plight of the historicists is similar to that of the first mate in the fable who, recognizing that he is capa-

⁵Cf. Miller, Jonathan Edwards, pp. 165-195; Edwin Scott Gaustad, The Great Awakening in New England (New York, 1957), pp. 80-101; Heimer and Miller, Great Awakening, pp. xxxv-xliii.

⁶Cf. Edwards, Affections, p. 272, in which Edwards attempts to explain that his notion of a "faculty" is not the usual disjunctive one. Locke also found himself repeatedly defending and qualifying his use of the term faculty; see Essay, II, XXI, 6.

⁷See Chapter 2, pp. 25-27.

ble of describing what he sees, proceeds to record a small sample of the infinite number of differences between the object of his attention and a neighboring edifice. If the historicists are to be believed, Edwards' psychological system was in many respects startlingly unique, and he is therefore a great psychological thinker.⁸ It is a mistake, however, to equate uniqueness with greatness. Two-headed sheep are unique, but hardly great. The positive, as well as the negative, aspects of Edwards' psychology must be clearly understood before a legitimate assessment can be made.

A Revised Concept of Scientific History

Each of the three fallacies which have been committed while trying to describe and analyze Edwards' psychological views have in common an over-reliance upon the intuitive powers of the reader. Presentists, like Roback and Fay, unfairly request that the reader somehow decipher their notion of contemporary psychology and assume that their sweeping and often unsupported generalizations are correct. Historicists assume, implicitly, that psychology is (and always was) such a universal discipline, that it needs no definition whatsoever. Finally, the historicist-negativists assume that the reader is capable of arranging their numerous Edwardsean negativisms such that a coherent positive statement will emerge. In each case ignorance, lack of interest, or both, have led historians to demand that the intuitive skills of their audience compen-

⁸Cf. Miller, Jonathan Edwards and "Sense of the Heart."

sate for their own inability to be explicit. At this point, the introduction of a somewhat arbitrary, but explicit and comprehensive definition of psychology is needed. Vagaries can only be lamented; definitions and models can be accepted, rejected, and amended. The negativist fallacy will be countered with a concrete model in chapter 4. The intuitive presentist and historicist fallacies will be answered with Prescriptive Theory which may be interpreted in part as an attempt to isolate the dimensions of Brett's "Human Nature" which have relevance throughout the history of psychology. The prescriptive definition of the history of psychology, and the model presented in chapter 3, provide the two concrete aspects of a modified concept of scientific history which will be used as an antidote to the intuitive and often confused investigations into the psychology of Edwards.

To issue an endorsement of scientific history, even in modified form, is to dive headlong into an intensely argued controversy that has raged more or less continuously for the past century. The central question of the debate concerns whether or not history is, should be, or can be "scientific." The issue was first vigorously debated in the nineteenth century when enthusiasm for science and its methodology reached an almost millennial intensity. Buckle, for instance, claimed that history should be the search for universal laws, while Bury requested that historians maintain a detached,

"objective" posture toward their subject matter.⁹ The positivist faith in the benevolent omnipotence of scientific goals and methodology appeared to be conquering even history.

Although the positivist conception of science has proven to be largely a golden calf, loud entreaties to make history a science may still be heard.¹⁰ Yet even in the nineteenth and early twentieth centuries, when science was carrying the day, numerous historians rejected the view that history could, or even should be, a science. Dilthey argued that historical knowledge, or "understanding," is fundamentally different from scientific laws.

So the process of understanding, as here set out, is to be understood as a kind of induction. And this induction belongs not to the class in which a general law is extracted from an incomplete series of cases, but rather

⁹Henry T. Buckle, History of Civilization in England 3 vols. (London, 1899). A short excerpt from Buckle's History appears in Patrick Gardiner, ed., Theories of History (Glencoe, Ill., 1959), pp. 105-124; J. B. Bury, "The Science of History." In Selected Essays (Cambridge, Eng., 1930), pp. 3-22.

¹⁰The contemporary thrust toward making history "scientific" has taken two principal directions. First there are those who urge that historians adopt the assumptions and goals of a "scientific" psychological theory, psychoanalysis. This endeavor is now called psychohistory, and among its leading practitioners are Erik Erikson and Robert J. Lifton; See Erikson, Young Man Luther (New York, 1958), Ghandi's Truth (New York, 1969), and Lifton's Home from the War (New York, 1973) and Death in Life (New York, 1967). The other side of the scientific history front is manned by those who would have historians imitate the quantitative aspect of science; see Lee Benson, The Concept of Jacksonian Democracy: New York as a Test Case (Princeton, N.J., 1961) and Charles Tilly, The Vendée (Cambridge, Mass., 1964).

in which a structure, an ordered system, is built, which gathers the separate instances into a unity.¹¹

Likewise, Trevelyan, countering Bury's pleas for objectivity, maintained that historians must always subjectively interpret their data. The simple process of accumulating dusty bits of data will never, claimed Trevelyan, synthesize itself into comprehensible history. The individual historian must supply the synthesis.¹²

The focal point of the scientific history issue is science itself. Debaters on all sides of the controversy have held a view of science which may be summarized as follows: (1) The scientific method is objective; and (2) the goal of science is the discovery of laws which yield predictable behavior. Recently, for instance, Hempel and Popper relegated history to second-class scientific status because historical explanations do not satisfy the predictive requirements of the deductive "covering law" model.¹³ Berlin, on the other hand, admits history's scientific "inadequacy," but views it

¹¹Wilhelm Dilthey, "The Understanding of Other Persons and Their Life--Expressions," in Gardiner, Theories of History, p. 224.

¹²G. M. Trevelyan, "Clio, a Muse" in Clio, a Muse and Other Essays, Literary and Pedestrian (London, 1913). For an excellent review of the Bury-Trevelyan debate consult W. H. Walsh, "The Limits of Scientific History," in James Hogan, ed., Historical Studies III (London, 1961), pp. 45-57.

¹³See C. G. Hempel and Paul Oppenheim, "The Logic of Explanation," in Feigl and Brodbeck eds., Philosophy of Science (New York, 1953), pp. 319-352, and Karl R. Popper, The Logic of Scientific Discovery (London, 1959). A good summary of the objectivist, deductive model of scientific inquiry may be found in Alan Donagan, "Historical Explanation: The Popper-Hempel Theory Reconsidered," History and Theory, 1964, 4, 3-26.

as a declaration of independence rather than as cause for lamentations over second class intellectual citizenship. Paraphrasing Dilthey, he holds that "the objective of all this [history] is to understand the relation of parts to wholes."¹⁴ History is humanistic, an impressionistic weaving together rather than a search for laws. And, of course, the weaving process is highly subjective, a selection of materials and interpretations based upon who knows how many personal and cultural factors.

Almost no one claims that history is scientific, either in its method or its goals.¹⁵ It is significant, however that those historians and philosophers who hold widely differing views concerning whether or not history can or should be scientific have not disagreed about the nature of science. Still, under the gloomy spell of the logical positivists, they see in science no more (and no less) than the objective search for laws. This represents, at best, an extremely limited view of the practice of science, a view which has recently begun to be amended by a number of influential philosopher-scientists. Concerning scientific "objectivity," Bronowski has written:

¹⁴ Isaiah Berlin, "History and Theory: The Concept of Scientific History," History and Theory, 1961, 1, 1-31.

¹⁵ Windelband was a notable exception. Writing in the late nineteenth century, he believed that history had already become a natural science, and he advocated the "recession" of history from the sciences; see W. Windelband, Geschichte und Naturwissenschaft (Strassburg, 1894).

What a scientist does is compounded of two interests: the interest of his time and his own interest. In this his behavior is no different from any other man's. The need of the age gives its shape to scientific progress as a whole. But it is not the need of the age which gives the individual scientist his sense of pleasure and of adventure, and that excitement which keeps him working late into the night when all the useful typists have gone home at five o'clock. He is personally involved in his work, as the poet is in his, and as the artist is in the painting.¹⁶

Likewise, the discovery of scientific laws may not be much different from the historical tapestry woven by the historian. The order found in nature and displayed through laws

. . . does not display itself of itself; if it can be said to be there at all, it is not there for the mere looking. There is no way of pointing a finger or a camera at it; order must be discovered, and, in a deep sense, it must be created.¹⁷

Even the classical physicists and astronomers, whose models and laws were long thought to represent the essence of scientific objectivity and predictability, were hardly objective in the usual sense of the term. As Kuhn has demonstrated, Copernicus, Kepler, and Galileo all had a pronounced mystical side which led them to formulate theories which were more symmetrical or beautiful than the accepted ones.¹⁸ The heliocentric universe of Copernicus, for example, did not predict the movements of heavenly bodies any better than Ptolemy's geocentric system. It did, however, satisfy the mathematician's

¹⁶ Jacob Bronowski, Science and Human Values, rev. ed. (New York, 1965), p. 8.

¹⁷ Ibid., p. 14.

¹⁸ Thomas S. Kuhn, The Copernican Revolution: Planetary Astronomy in the Development of Western Thought (Cambridge, Mass., 1957); see also Kuhn's Scientific Revolutions.

need for neatness, simplicity, and "beauty"; and that is why Copernicus endorsed it.¹⁹ If history's greatest scientists had to take the positivists' test of detached objectivity and evaluation by predictability, it is clear that most would fail. More than anyone else, Polanyi has given specificity and legitimacy to the revised, personalist, conception of science. He has formulated a general system of epistemology, Personal Knowledge, which subsumes scientific and historical knowledge, and which is consistent with what is now known about the history of science and scientific discovery.²⁰ Polanyi's greatest debt is to Dilthey and the later Gestalt psychologists although his theory of Personal Knowledge cannot be reduced to theirs. Polanyi holds that man's chief distinction is his yearning to understand, which is the process by which man merges a set of particulars into an awareness of their joint significance. We seek clarity, precision, and an altogether satisfying solution. That which is held to be true is always the most satisfying. Yet we have little or no control over what satisfies us, any more than does the lowest animal, and it is this "tacit dimension" of knowledge which we humans share with them.²¹

¹⁹ Kuhn, Copernican Revolution, pp. 171-180.

²⁰ Michael Polanyi, Personal Knowledge: Toward a Post-Critical Philosophy (Chicago, 1958). This is surely one of the most remarkable books written in the twentieth century. For a psychologist's reaction to it, see Abraham H. Maslow, The Psychology of Science: A Reconnaissance (New York, 1966).

²¹ Personal Knowledge, pp. 132-195; see also Polanyi's The Tacit Dimension (New York, 1966).

This view entails a decisive change in our ideal of knowledge. The participation of the knower in shaping his knowledge, which had hitherto been tolerated only as a flaw--a shortcoming to be eliminated from perfect knowledge--is now recognized as the true guide and master of our cognitive powers. We acknowledge now that our powers of knowing operate widely without causing us to utter any explicit statements . . . The ideal of a knowledge embodied in strictly impersonal statements now appears self-contradictory, meaningless, a fit subject for ridicule. We must learn to accept as our ideal a knowledge that is manifestly personal.²²

Scientific knowing, like all other forms of knowing, is not detached or uninvolved. It is indeed objective in the sense of establishing contact with a hidden reality," but it represents a "fusion of the personal and the objective."²³ The personal, tacit (one is tempted to say unconscious) dimension is present in every act of scientific understanding, including the discovery of laws.

In an essay entitled "Understanding History," Polanyi has extended his theory of Personal Knowledge from science to history.²⁴ Polanyi holds, in opposition to debaters on the topic from Buckle to Berlin, that "the characteristic features of historiography . . . emerge by the continuation of a development broadly prefigured already within the natural sciences."²⁵ There exists an essential unity of scientific and historical knowledge. Scientists may study the structure

²²Michael Polanyi, The Study of Man (Chicago, 1959), pp. 26-27.

²³Personal Knowledge, pp. vii-viii.

²⁴In The Study of Man, pp. 71-99.

²⁵Ibid., p. 73.

of nature, machines, animals, or men, while historians study men and their ideas in complex situations. Yet each represents a search for an integrated understanding of the meaning of a set of particulars and each is personal. On the molecular levels of physics and chemistry, the "passionate intensity," as Yeats called it, is a function of the beauty of the formulae and the pleasure derived from predicting correctly. With history, the personal involvement lay in our encounter with complex, interesting individuals and their ideas.²⁶

If all science and history is an intensely personal enterprise, what, then, is meant by the term "scientific history." Simply this: that the historian should attempt to make explicit the tacit dimension, as much as possible; he should lay bare his assumptions and pre-conceived points of view as far as they are known. "History has no meaning," Popper has written, "there can be no history of 'the past as it actually happened.'"²⁷ The historian must give it meaning much as a scientist gives meaning to data with a theory. Without personal selection history, like science, would be strangled by superfluous information.

The only way out of this difficulty is . . . consciously to introduce a preconceived selective point of view into one's history; that is, to write that history which interests us. This does not mean that we may twist the facts until they fit into a framework of preconceived ideas, or that we may neglect the facts that do not fit.

²⁶ Ibid., pp. 73-85.

²⁷ Karl R. Popper, The Open Society and Its Enemies, 2 vols. (London, 1945), II, pp. 254-256.

On the contrary, all available evidence which has a bearing on our point of view should be considered carefully and objectively²⁸

By "objectively" is meant with an awareness of one's personal viewpoint, not under the naive assumption that one has no biases or principles of selection.

History, then, is unavoidably presentist. A man, an idea, or an event is what it is only as seen through a prismatic point of view. Paradoxically, history becomes more scientific when it acknowledges the personal and selective nature of its theorizing and data collecting. The assertions and conclusions of this kind of scientific history can be evaluated in relation to the viewpoint of the historian. This is certainly the case in psychology, for example, where the evaluation of a piece of research is almost always accompanied by a determination of the writer's status as behaviorist, psychoanalyst, existentialist, etc.²⁹ The

²⁸Karl R. Popper, The Poverty of Historicism, 2nd ed. (London, 1960), p. 150; Popper uses the term "historicism" very differently from that employed by Stocking and followed here. See also Robert F. Berkhofer's A Behavioral Approach to Historical Analysis (New York, 1969) for a plea that historians make clear their biases and assumptions. To Popper, "historicism" is "an approach to the social sciences which assumes that this aim is attainable by discovering the 'rhythms' or the 'patterns,' the 'law' or the 'trends' that underlie the evolution of history" (Poverty of Historicism, p. 3). The Marxists, according to Popper, represent the epitome of this "poverty-stricken" position.

²⁹One need only survey a personality theory text such as Salvatore R. Maddi, Personality Theories: A Comparative Analysis, 2nd ed. (Homewood, Ill., 1972) for convincing evidence that the same psychological data can be interpreted in widely different but theoretically consistent ways.

psychologist is aware, or should be, that data collection and interpretation is greatly influenced by the assumptions and purposes of the scientist.³⁰

In studying the psychological thought of Edwards there is a special urgency to "make our ideas clear," as Peirce once put it. Unavoidable presentism needs to be transformed into conscious presentism. The inappropriate and ambiguous presentist approach of Roback and Fay clearly twists and neglects pertinent aspects of Edwards' ideas in an attempt to make him comprehensible to twentieth-century psychologists and historians of psychology. The historicists, on the other hand, are too naive. "The nature of man" which they use implicitly is much too broad a concept to carry any meaning. What is needed in the study of Edwards is a point of view, a telescopic view into the history of psychology, which neither focuses too broadly on Edwards nor emerges too narrowly from the present: a psychology for all seasons, true to the dead and understandable to the living. The point of view known as Prescriptive Theory will serve this function.

The Mysterious Zeitgeist of Edwin G. Boring

Just as any student of American Puritanism must begin with Perry Miller, a historian of psychology must first deal with Edwin G. Boring. Since Prescriptive Theory is in part a

³⁰The classic demonstration of the importance of "demand characteristics" or "experimenter bias" in psychological research is by Robert Rosenthal, Experimenter Effects in Behavioral Research (New York, 1966).

reaction, or at least an amendment, to Boring's historical point of view, something needs to be said about his historiography. In chapter one, Boring was characterized as a progressionist historian who viewed the history of psychology as a series of events which led toward, through, and beyond Wundt.³¹ More specifically, Boring held what might aptly be called an experimental view of history. Trained in experimental psychology under the rigorous Titchener, Boring carried the experimentalist's quest for cause and effect relationships over into his historical studies.³² History is the Great Experiment, a scientific enterprise in the best positivist tradition.

To think of the man whose brilliant novel thought heads an important development as the originator is to abandon scientific psychology and suppose that among all orderly lawful phenomena the insights of genius constitute an exception in that they occur without causes.³³

³¹See chapter 2, pp. 14-21.

³²It is significant that Boring's great History is dedicated to Titchener, and an engraving of Wundt adorns the frontispiece of that volume.

³³History, p. 745. A typical Boring causal chain is his "Nerve Physiology as a Paradigm of Scientific Progress." He states

(1) Progress is continuous when viewed in large perspective, but intermittent and irregular when examined for small intervals of time. There were decades when nothing of great importance happened, yet a steady development from 1790 to 1970 nonetheless.

(2) Discovery depends upon previous discovery. The series, Galvani-Volta-du Bois-Reymond-Helmholtz-Berstein-Lucas-Adrian-Lillie, labels a continuous development by noting eight successful prominent features of it. (History, p. 43)

To Boring, the purpose of the history of psychology, as with the history of any science, is to isolate cause-effect relationships. By his own admission, however, multiple causation is the rule in history, hence on numerous occasions Boring invoked the term Zeitgeist to "explain" scientific discoveries and events. Boring's "mature" definition of the Zeitgeist was "the total body of knowledge and opinion available at any time to a person living within a given culture."³⁴ History is a most imperfect laboratory and the invocation of the Zeitgeist concept is really an admission that the causative variables are unknown.³⁵ It was a hard determinists' way of admitting defeat; for "the Zeitgeist," as Dorothy Ross has remarked, is a "truism of historical explanation" which "offers only the most elementary kind of causal insight."³⁶

Philosophers do not make discoveries in the sense that Boring believed scientists discover hidden reality. They do

³⁴"Dual Role of the Zeitgeist in Scientific Creativity," Scientific Monthly, 1955, 80, 101-106. Quote from p. 106. Boring appeared to change his definition of the Zeitgeist more than once. Robert A. Friedman, however, has shown convincingly that Boring's view of the Zeitgeist remained relatively constant throughout his long career; see "Edwin G. Boring's 'mature' view of the Science of Science in Relation to a Deterministic Personal and Intellectual Motif," Journal of the History of the Behavioral Sciences, 1967, 3, 17-26.

³⁵Boring seemed to realize this. He remarked, "History is a part of nature where multiple causation rules and where single effective causes are the over-simplifications, devised to bring the incomprehensible complexity of reality within the narrow compass of man's understanding" (History, p. 744).

³⁶"The 'Zeitgeist' and American Psychology," Journal of the History of the Behavioral Sciences, 1969, 5, 256-262;

not fit neatly into a causal chain because they tend to argue over relatively timeless issues across the centuries. They are not associated with events. The principle concern for Boring was not what fundamental questions a psychologist asked about man, but rather his scientific status and his role in a causal chain of historical events. An excellent example of Boring's de facto avoidance of the fundamental philosophical issues in psychology may be found in one of his earliest historical papers.³⁷ In 1927 Boring had not yet adopted the Zeitgeist as an explanatory term. Instead, he settled for a historical application of James:

The stream of consciousness is sensibly continuous in the history of thought as well as in the thinking of and individual. Certainly the historian is impressed by the fact that almost never does an idea seem entirely new.³⁸

Boring undertook to prove this "by a few psychologists' instances."³⁹ His discussion included analyses of the important discoveries of Bell, Müller, Helmholtz, Broca, and other contributors to Wundt's founding of experimental psychology. He proves, to his own satisfaction, that indeed the mysterious Zeitgeist (as he would refer to it by 1929) was at work; that "'fathers' are necessarily also 'sons' and that the 'founders' are very apt to be 'promoters!'"⁴⁰

³⁷"The Problem of Originality in Science," American Journal of Psychology, 1927, 39, 70-90. This paper deals with the science of psychology. Oddly, many of Boring's statements concerning the Zeitgeist occur in a very general scientific context, with little mention of psychology.

³⁸Ibid., p. 71.

⁴⁰Ibid., p. 71.

³⁹Ibid., p. 71.

The "psychological" nature of these discoveries rests on Boring's belief that they led directly to Wundt's laboratory and hence to twentieth-century psychology. A number of non-experimentalists are also mentioned, however, including Locke, Berkeley, Hartley, Descartes, and a few ancient Greeks. According to Boring, these philosophers seemed to be interested in matters which also interested the nineteenth-century "father-sons" but their influence is too amorphous to trace decisively.⁴¹ While scientist-psychologists emerge from an exasperating fertility, their philosophical forbears are seen as barren, or orphans, depending on one's preference for the lineal metaphor. "Philosophy," Boring remarked, "becomes common sense slowly, but . . . inevitably."⁴² Thus, one of Kant's chief functions in the history of psychology is to provide Johannes Müller with the "common sense" foundation for his scientific discovery of a "physiological counterpart of a Kantian category."⁴³ Yet what, psychologically, unites Kant and Müller as the unexorable Boringian Zeitgeist moves on? What fundamental principles are involved? Boring's experimental view of history prevented him from even asking the question, much less answering it. On the contrary, he saw

⁴¹Vague relationships did not interest Boring; an individual either did or did not "influence" someone else. Boring's intense need for closure, historical and otherwise, is discussed by Julian Jaynes, "Edwin Garrigues Boring 1886-1968," Journal of the History of the Behavioral Sciences, 1969, 5, 99-112.

⁴²"Problem of Originality," p. 74.

⁴³Ibid., p. 73.

philosophy and theory as potential enemies which sometimes prevented experimental psychologists from going about their experimental business.⁴⁴ Boring's determinism and the accompanying lame-duck Zeitgeist concept obscures not only the contributors to the Zeitgeist, but also the fundamental psychological principles which men argue about, even through a radical change in methodology. Boring was a scientific historian in the old positivist sense, and in the manner indicated by Polanyi and Popper. He searched for causes and effects, if not laws, and he made his assumptions perfectly clear. Within the area circumscribed by those biases, his histories will probably never be surpassed.⁴⁵

If his approach has been rewarding to some, it has been somewhat stultifying to others who do not share his experimental view of history. Unfortunately, few historians of psychology who hold to some variant of Brett's Human Nature approach to the history of psychology have been as scientific

⁴⁴ According to Boring, Psychology has never succeeded in taking philosophy to itself or in leaving it alone . . . A division of the mind within psychology is not healthy . . . Psychology ought to . . . proceed, unimpeded by a divided soul, about its business (History, p. 742).

Boring's experimental view of history, and its concomitant disdain for philosophy, has been very influential. Fred Keller, for instance, holds that

Descartes and the "mental philosophers" played an early part in launching the young science with which we are here concerned. But much more had to be done before our modern discipline emerged. Sooner or later, these armchair ideas, no matter how insightful, had to leave the speculative realm for the world of observation and experiment (The Definition of Psychology, 2nd ed., New York, 1973).

⁴⁵ In addition to his History, Boring's other classic

as Boring; that is, they have failed to present their point of view explicitly in the form of a usable definition of psychology. The confusing situation among these professional historians of psychology is very similar to that which exists among serious students of Edwards who have necessarily adopted Brett's general viewpoint. By dropping a comprehensive definition of psychology into the intuitive lap of the reader, they render many of their assertions empty and meaningless. Some of Gardner Murphy's historical work exemplifies the confusion that may result when a historian discusses the "psychology" of men and eras far beyond Boring's experimental mainstream, without offering a replacement for his neat, narrow definition of psychology. At one point, for instance, he argues for and purports to describe Pythagorean psychology. Yet it is quite unclear why Pythagorus is a psychologist, or how he can be included under the same rubric as Freud, who is also discussed at length in the book.⁴⁶ In another book, Asian Psychology, Murphy moves the farthest imaginable distance, both historically and geographically, from Boring's definitional territory.⁴⁷ Initially, he must

is Sensation and Perception in the History of Experimental Psychology (New York, 1942), a volume so thorough and exhaustive that, as Jaynes has pointed out, there was virtually no one capable of adequately reviewing it when it appeared; see Jaynes, "Edwin Garrigues Boring."

⁴⁶Psychological Thought from Pythagorus to Freud (New York, 1968).

⁴⁷Gardner Murphy & Lois B. Murphy, eds., Asian Psychology (New York, 1968).

fortify his position; like those who purport to discuss seriously the psychology of Edwards, he must demonstrate the possibility of the existence of Asian psychology to an audience of skeptical Boringians. He accomplishes this task by restating and elaborating an important point made by Brett's editor, R. S. Peters.⁴⁸ He points out that there are two reasons why, until very recently, Western universities have included philosophy and psychology in the same department. First, "psychology was a part of philosophy because it was immature."⁴⁹ It had not yet asserted the scientific independence whose progress Boring was to describe so eloquently. Yet there is another important reason for the close relationship between philosophy and psychology, "Namely that the philosopher took universal knowledge and wisdom as his goal and he certainly had to include wisdom about the mind."⁵⁰ This quest for wisdom about the mind, the "especially precious object of knowledge,"⁵¹ Murphy believes holds true for all literate cultures and times. These countless, timeless inquiries into the nature of the human mind, that is human nature, constitute what he calls the "universal psychology-- a psychology that applies wherever mind, or let us say, in intuitively accepted terms, wherever mind, heart, and will

⁴⁸"Theory, Policy, and Technology."

⁴⁹Asian Psychology, p. viii.

⁵⁰Ibid., p. ix.

⁵¹Ibid., p. ix.

exist."⁵² Thus Murphy justifies his volume of Asian psychology and, it might be added, this volume as well.

The result, however, is far from satisfactory because he refuses to go beyond "intuitively accepted terms." Like Miller, Cherry, Elwood and other Edwards scholars, Murphy does not elaborate his conception of the dimensions of human nature. For better or worse, the Western mind is an instrument which understands only when it classifies and thereby views things in some relation to each other. Without some point of view, some superordinate classification scheme, no order can be extracted from chaos. We need to know, in other words, specifically what kinds of questions have been asked about human nature, and what answers have been given. Without this scientific addition to a history of psychology, which lay outside Boring's Wundtian hourglass, "psychology" remains only a convenient elastic label which may be applied in a haphazard manner. Calling an idea "psychology" does not promote the understanding of Confucius any more than it does when it is applied to Edwards.⁵³

The Thematic Approach to the History of Psychology:
"Prescriptions" and "Fundamental Issues"

Neither Brett nor his lineal descendents in the history of psychology should be evaluated too critically for

⁵²Ibid., p. vi.

⁵³That is, "understanding" in the sense meant by Dilthey and Polanyi: a perception of the joint significance of a set of particulars.

failing to specify their notion of human nature. The undertaking of scientific history is much more difficult for them than it was for Boring; they must, in effect, attempt to reduce much of the most complex and profound Western thought of the past 2,500 years to a few categories. To attempt such an intellectual feat requires great courage, or from another point of view, great foolishness. The categories must be relatively few in number, timeless, as mutually exclusive as possible, and exhaustive. The accomplishment of this monument of schematization requires both erudition and arbitrary decisiveness, arrogance and humility.

It is little wonder, then, that only two serious efforts, by Robert I. Watson and Michael Wertheimer, have been made to bring schematic order to the approach of Brett.⁵⁴ Although there are numerous differences between Watson's Prescriptive Theory and the Fundamental Issues of Wertheimer, they have in common the desire to delineate the basic principles which unify pre-experimental psychology with post-Wundtian psychology, to bridge the gap created in part by Boring's deterministic and amorphous Zeitgeist. Yet both Watson and Wertheimer are also indebted to Boring. Each includes not only his components of human nature (contentual

⁵⁴Watson, "Prescriptive Science: A Prescriptive Analysis of Descartes' Psychological Views," Journal of the History of the Behavioral Sciences, 1971, 7, 223-248; "Prescriptions as Operative in the History of Psychology," Journal of the History of the Behavioral Sciences, 1971, 7, 311-322; "Prescriptive Theory and the Social Sciences." Invited address delivered at the annual convention of the American Psychological Association, August, 1974; and Michael Wertheimer, Fundamental Issues in Psychology (New York, 1972).

or substantive issues), but also certain methodological principles. There are not only various assumptions about human nature, there have also been differing opinions regarding the manner in which those assumptions should be investigated. There are, in other words, methodological issues as well as substantive ones.

It is Watson's position that psychology currently lacks, and always has lacked a unifying paradigm such as exists in sciences like physics or chemistry. He has therefore argued that the history of psychology, from Descartes to the present, is viewed most profitably in terms of a number of themes called "prescriptions."

The overall function of these themes is orientative or attitudinal; they tell us how the psychologist-scientist should behave. In short, they have a directive function. They help to direct the psychologist-scientist in the way he selects a problem, formulates it, and the way in which he carries it out.⁵⁵

Those prescriptions which Watson has isolated are arranged in contrasting pairs (see Table 1).⁵⁶ Note that in this stage of the history of psychology, some prescriptions are clearly contentual (e.g., Determinism-Indeterminism), others clearly methodological (e.g., Quantitativism-Qualitativism), while there is still another group that may fall in either category (e.g., Functionalism-Structuralism).

In contrast to Watson, Wertheimer has no firm theoretical base from which to launch his historical scheme. He

⁵⁵Watson, "Prescriptive Science," p. 437.

⁵⁶Ibid., pp. 436-437.

TABLE 1

PRESCRIPTIVE TERMS ARRANGED IN CONTRASTING PAIRS

Conscious mentalism-Unconscious mentalism (emphasis on awareness of mental structure or activity--unawareness).

Contentual objectivism-Contentual subjectivism (psychological data viewed as behavior of individual--as mental structure or activity of individual).

Determinism-Indeterminism (human events completely explicable in terms of antecedents--not completely so explicable).

Quantitativism-Qualitativism (stress upon knowledge which is countable or measurable--upon that which is different in kind or essence).

Rationalism-Irrationalism (emphasis upon data supposed to follow dictates of good sense and intellect--intrusion or domination of emotive and conative factors upon intellectual processes).

Staticism-Developmentalism (emphasis upon cross-sectional view--upon changes with time).

Staticism-Dynamicism (emphasis upon enduring aspects--upon change and factors making for change).

Empiricism-Rationalism (major, if not exclusive source of knowledge is experience--is reason).

Functionalism-Structuralism (psychological categories are activities--are contents).

Inductivism-Deductivism (investigations begun with facts or observations--with assumed established truths).

Mechanism-Vitalism (activities of living beings completely explicable by physio-chemical constituents--not so explicable).

Methodological objectivism-Methodological subjectivism (use of methods open to verification by another competent observer--not so open).

Molecularism-Molarism (psychological data most aptly described in terms of relatively small units--relatively large units).

Monism-Dualism (fundamental principle or entity in universe is of one kind--is of two kinds, mind and matter).

Naturalism-Supernaturalism (nature requires for its operation and explanation only principles found within it--requires transcendent guidance as well).

Nomotheticism-Idiographicism (emphasis upon discovering general laws--upon explaining particular events or individuals).

Peripheralism-Centralism (stress upon psychological events taking place at periphery of body--within body).

Purism-Utilitarianism (seeking of knowledge for its own sake --for its usefulness in other activities).

is simply a man with a problem; he seeks a way to make sense out of psychology, a complex science with an even more complex past. Over a period of ten years, he says, he played

a kind of intellectual game, to see if I could find some questions that are broad and that are central to psychology and to which no clear-cut answers could be given [because then they would stop being recurrent issues] . . . that anybody else would come up with the same set of questions is highly unlikely; further, given the set, it is improbable that anyone else would group them in the same way or present them in the same order.⁵⁷

Wertheimer is too modest, for he is very knowledgeable about contemporary psychology and an able historian as well.⁵⁸ The results of his informal approach show a number of important similarities with Watson's more circumscribed, systematic approach. Wertheimer's Fundamental Issues are presented in Table 2.

Both Prescriptions and Fundamental Issues are presented as pairs of polar opposites. Each theorist emphasizes that this mode of presentation is mostly a mnemonic convenience, although most thinkers have aligned themselves closer to one pole than to another. Both approaches include contentual and methodological dimensions, and each has distilled his schematization to a relatively few issues.⁵⁹

⁵⁷Wertheimer, Fundamental Issues, p. vii.

⁵⁸He is the author or co-author of a number of textbooks dealing with contemporary psychology and the excellent A Brief History of Psychology (New York, 1970).

⁵⁹Wertheimer, however, complicates his presentation with many sub, and sub-sub issues, while Watson's prescriptions are relatively discrete and (it is claimed) exhaustive.

TABLE 2

THE FUNDAMENTAL ISSUES

The Substantive Issues

- (1) Man as Master versus Man as Victim of his Fate
- (2) Man as Good versus Man as Evil
- (3) Andsum versus Transsum (the whole of man is merely, or more than, the sum of his component parts)
- (4) Mind versus Body
- (5) Subjectivity versus Objectivity
- (6) Past versus Present
- (7) Nature versus Nurture
- (8) Simplicity versus Complexity

The Methodological Issues

- (9) Richness versus Precision
- (10) Theory versus Data

There are, however, several differences between Prescriptive Theory and the Fundamental Issues approach which suggest the greater systematic usefulness of prescriptions. The Fundamental Issues are admittedly haphazard and idiosyncratic; a potpourri whose pre-twentieth-century material is derived largely from secondary sources. It has a practical underpinning rather than a theoretical one; it was written as an organizational text for students and that is why much of the terminology is catchy but rather imprecise (e.g., Master-Victim; Good-Evil). Prescriptions, on the other hand, though unavoidably idiosyncratic, to some extent, represent the condensation of a long and continuing study of the history of Western psychological thought. In addition to Watson's own work, a number of dissertations have recently applied content analysis to various aspects of Western thought in an attempt to work toward a prescriptive history of psychology.⁶⁰ Importantly, the prescriptive framework seeks to describe someone's psychological thought specifically so that prescriptive comparisons can then be made. In the Fundamental Issues approach, however, no attempt is made to

⁶⁰Watson, "View of Descartes." For other practical applications of prescriptive theory to the history of psychology, consult the following dissertations done at the University of New Hampshire: Barbara C. Ross, "Psychological Thought within the Context of the Scientific Revolution, 1665-1700." (1970); Kenneth R. Gibson, "The Conceptual Bases of American Psychology: A Content Analysis of the Presidential Addresses of the American Psychological Association, 1892-1970" (1970); and Ronald H. Mueller, "The American Era of James Mark Baldwin (1893-1903)" (1974). See also the recent study by G. Kawash & A. H. Fuchs, "Prescriptive Dimensions for Five Schools of Psychology," Journal of the History of the Behavioral Sciences, 1974, 10, in press.

describe a thinker in terms of Issues. Rather, each individual is simply used as an example of this or that issue. The Prescriptive framework requires that one specify which prescriptions are salient, dominant, and counter-dominant for a given thinker or period.⁶¹ Obviously, the concerns of one age are not necessarily those of another. Finally, Prescriptive terminology is relatively precise, if jargonesque, compared to the somewhat esoteric Fundamental Issues.

None of this should be construed as a condemnation of Wertheimer or his Fundamental Issues. In fact, two of his issues, Master-Victim and Andsum-Transsum, are used extensively in the analysis of Edwards. The discussion simply serves to demonstrate that the present purpose, a clear systematic description of the heretofore inscrutable psychology of Edwards, is more consistent with the prescriptive approach than with the more informal and somewhat less historically oriented Fundamental Issues.⁶² Both represent laudable, useful attempts to provide a schematic framework for writing a scientific history of psychology which lie inside and outside Boring's experimental territory.

⁶¹See Watson, "Prescriptive Science."

⁶²Although Wertheimer spans much of Western history in search of examples for his various issues, most come from the twentieth century. This is consistent with his purpose: to integrate the field of psychology historically for contemporary students; see also W. D. Hitt, "Two Models of Man," American Psychologist, 1969, 24, 651-659, for an attempt to specify the dimensions of human nature implicit in two important contemporary positions, behaviorism and phenomenology.

A Prescriptive Description of Previous
Research on the Psychology of Edwards

It was noted in chapter one that Edwards' thought nearly always tends toward synthesis and unity. He was extraordinarily adept at extracting ideas from such diverse thinkers as Augustine, Calvin, Locke, and Hutcheson, and unifying them in a way that suited his purposes. His urgent need to discover unity in man's magnificent diversity is perhaps the principal contributor to Edwards' inscrutability. The language of his expositions is very logical and apparently simple, while the underlying implications of those statements are incredibly paradoxical. In order to raise the understanding of Edwards' psychological theory above the intuitive level, his theory must be integrated into a coherent model which depolarizes the paradoxes. Yet, as was pointed out earlier, the immense complexity itself is not clearly understood. It is easy to say that Edwards believed that man was a rational-emotive unity or that man is both proactive and reactive, when one is ignorant of what he is saying. The chief function of Prescriptive Theory and the Fundamental Issues is to make explicit the rather astounding implications of Edwards' paradoxical theory.

Nearly every commentator on Edwards' psychology during the past forty years believes that though Edwards used disjunctive faculty terminology, he meant to describe man as a rational-emotive unity.⁶³ This unified view of the mind was

⁶³Except, of course, for Roback and Fay. Roback's treatment is too superficial to be taken seriously while, as

usually, though not always, expressed in Edwards' numerous analyses of the conversion experience. The phrase which Edwards most often used to express the unity was "a sense of the heart," and a host of supportive "taste" metaphors.⁶⁴ A "sense of the heart" is certainly composed of a rational and an emotional component (what Edwards misleadingly referred to as "faculties"), but it cannot be reduced to the simple additive sum of reason plus emotion. The whole, in other words, is far more than the sum of its parts; it is what Max Wertheimer called a *gestalten*, or a Transsumative Whole.⁶⁵

In a *gestalt*, the parts are not indifferent to each other, but are mutually related; they interact and influence one another. In an *andsum*, one part may be changed without other parts of the whole being affected in any major way, but in a *gestalt* or *transsum*, change of one part may produce a radical change in other parts or in the entire whole--as in a soap bubble.⁶⁶

Edwards' "sense of the heart" is thus a particular expression of a unified psychological view which shall be referred to as transsummative man, an integrated coordination of apparently diverse components.

Fearing has pointed out, Fay "misinterprets Edwards' psychology, which he thinks is Aristotelian and scholastic because Edwards speaks of only two rational faculties, understanding and will ("Will and Intellect," p. 553).

⁶⁴See Chapter 2, pp. 43-59.

⁶⁵A clear expression of Gestalt may be found in Max Wertheimer, Productive Thinking, Michael Wertheimer, ed. (New York, 1959). Although he did not invent the term *gestalt*, Wertheimer is generally credited with founding the formal school of *gestalt* psychology.

⁶⁶Michael Wertheimer, Fundamental Issues, p. 69.

The important prescriptive implications are that Edwards' transummative view of man, as his commentators have described it is (1) vitalistic, (2) supernaturalistic, (3) molar, and (4) dynamic. Clearly for Edwards the explanation of the activities of living beings requires a vitalistic, emergent phenomenon, "a sense of the heart." Yet it is vitalistic in a special sense. Edwards' psychological laboratory was his parish and his subject matter was religious conversion. Thus the "sense of the heart" did not simply emerge from man's inherent rational and emotive capacities, it required transcendent guidance. Edwards' emergent principle was, in other words, supernaturalistic as well as vitalistic.

Wertheimer points out that transsummative explanations are usually relatively molar rather than molecular.⁶⁷ This is certainly the case with Edwards. Puritan psychology before and after Edwards often found itself embroiled in scholastic debates concerning the sovereignty of this or that hypothetical faculty. Minute analyses were undertaken to demonstrate that the reason or the will is the "dominant" faculty.⁶⁸ Edwards never involved himself in molecular debates of this sort. His transsummative view of the faculties as integrated aspects of a superordinate whole led him to an entirely different, relatively molar level of analysis.

⁶⁷Ibid., pp. 78-79.

⁶⁸Analyses of the "faculty" debates are in Miller, Seventeenth Century, Fulcher, "Puritans and Passions," and especially Fiering, "Will and Intellect."

It is almost a truism to state that "a sense of the heart" is a dynamic concept, yet the obviousness of the relationship should not be allowed to obscure it. The emergence of man's transsummative whole, "a sense of the heart," was said to represent the culmination of the most significant change ever undergone by man, his conversion from sinner to saint. Edwards often used his theory to defend his involvement with emotional revivalism in the Great Awakening. His opponents in the controversy, Charles Chauncy and the "old light," objected to both the emotionality of revivals and to the soliciting of converts. Their psychological view, a reason-oriented scholastic approach, emphasized the "reason" rather than rational-emotive involvement, and stability rather than change.⁶⁹

Edwards' view of transsummative man as a vitalistic, molar, dynamic whole is represented in Figure 1. God is responsible for the "indwelling principle," within Transsummative man.⁷⁰

Characteristically, Edwards was not content merely to describe, as best he could, a paradoxical view of man. Instead he went much further to describe how the transsummative man he sketched might behave in his relationship with

⁶⁹This debate had important political and social consequences; see Joseph Tracy, The Great Awakening: A History of the Revival of Religion (Boston, 1842); Heimert, Religion, and Gaustad, Great Awakening in New England.

⁷⁰"A Divine and Supernatural Light . . ." in S. E. Dwight, ed., The Works of President Edwards, 10 vols., VI, p. 174.

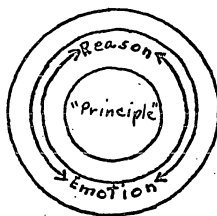


Figure 1. Edwards' transsumative view of man.

God. One might object to including this issue in a consideration of a system of psychology; theology usually subsumes man-God relationships. Yet Edwards clearly viewed the man-God relationship in psychological terms, sometimes Lockean and at other times, Augustinian. A theology-psychology distinction is false to Edwards' view of the universe, which he saw as operating in a moment-to-moment dependence upon God. Thus man's relationship to God can be viewed as a type of perceptual psychology in which man is seen in relation to the Holy Spirit or a social psychology in which he is seen in relation to the Holy Spirit or a social psychology in which he is seen in relation to God's universe. This does not represent an inappropriate stretching of the term "psychology" as used by Brett and followed here. Until very recently, psychological thought has always been embedded in other contexts. For Edwards, the context was God, always and everywhere.

Investigations into Edwards' conception of the man-God relationship has led, as we have seen, to a debate between those who endorse an "Edwards-Locke psychological equation" and those who do not. The former group believes that Edwards followed Locke in asserting that man is passive or merely reactive. The latter holds that Edwards fashioned a view of man who is both proactive and reactive. Wertheimer has aptly labeled this fundamental issue "Man as Master versus Man as Victim of His Fate."⁷¹ A prescriptive summary of the

⁷¹Wertheimer, Fundamental Issues, pp. 27-53.

Edwards-equals-Locke view of a totally-reactive Man ("Victim") emphasizes (1) Unconscious Mentalism, (2) Contentual Subjectivism, (3) Determinism, (4) Empiricism, and (5) Structuralism.

(1) Unconscious Mentalism. The British empiricist tradition emphasizes the combination or association of mental elements in a manner that is neither controlled nor observed by the individual. Simple ideas, the heart of Locke's emphasis upon passivity, become associated with each other according to various "laws" such as contiguity or continuity.⁷² Edwards sometimes referred to the "indwelling principle" resulting from a conversion experience as a "new simple idea."⁷³

Contentual Subjectivism-Structuralism. To Locke, and hence to Edwards, psychological data is viewed as the mental structure or activity of the individual. Both Locke and Edwards derived much of their evidence from personal introspection. In fact, Locke is often seen as one of the fountainheads of the introspectionist school of psychology known as "structuralism," though the structuralists owe more to James Mill's mental-chemistry notions than to Locke.⁷⁴ A psychological view which emphasizes contentual subjectivism-

⁷²This is a cornerstone of the school of philosophical psychology known as "associationism," from Hobbes to Bain; see Howard C. Warren, A History of the Association Psychology (New

⁷³Cf. Affections, p. 205.

⁷⁴The classic statement of the "structuralist" position is Edward Bradford Titchener, "The Postulates of a

structuralism is also consistent with the earlier Puritan "structuralism" whose advocates delighted in airy speculation about "faculties" which they regarded as physiological structures located somewhere in the mind.⁷⁵ Edwards' concern over the mental morphology of conversion is said to place him squarely in both structural traditions.

Determinism. Psychological theorists from Locke to Skinner who have viewed man as a passive, reactive organism, have had little patience with the notion of free will. According to Locke, human action is determined by "the great motive," or "some uneasiness" which renders man "ultimately the passive subject of a natural necessity consequent upon 'uneasiness.'" ⁷⁶ It is also very easy to show that Edwards' diatribe against the Arminians is chiefly directed toward demonstrating that there are no acts which are devoid of

Structural Psychology," Philosophical Review, 1898, 7, 449-465; see also Edna Heibredner, Seven Psychologies (New York, 1933), pp. 113-151.

⁷⁵There is a sense in which the "faculty" concept is functional: a "reason" or a "will" implies the execution of some sort of activity. Normally, however, "faculties" were thought of as semi-independent entities or elemental structures of the mind rather than as complementary functions of a total act, as the American school of functional psychology would have it. The term functional is confusing, as was demonstrated long ago by C. A. Ruckmick, "The Use of the Term Function in English Textbooks of Psychology," American Journal of Psychology, 1913, 24, 99-123. On the school of American functionalism, consult James R. Angell, "The Province of Functional Psychology," Psychological Review, 1907, 14, 61-91, and Heibredner, Seven Psychologies, pp. 201-233.

⁷⁶Essay, II, xxi, 29. A. C. Fraser, the editor, points out that this was not Locke's original view but that, in any event, he viewed the will as fully determined, whether by the "greater good," or "some uneasiness," see Essay, I, p. 330.

motivation, that is of antecedent causes.⁷⁷ Although a reactive view of man need not be mentalistic like Locke's (or Edwards' by virtue of the Locke-Edwards equation), it is necessarily deterministic.

Empiricism. Locke is synonymous with empiricism: all of man's materials for reason and knowledge, he stated simply, come "from EXPERIENCE."⁷⁸ In this view, man is held to be more complex but not fundamentally different from a popcorn kernel. Only when heat (sensational experience) is applied does it behave the way popcorn kernels are supposed to behave. Without "experience," it is inert; after the imposition of foreign stimulation it functions, but only reactively. It has been claimed that Edwards joined with Locke in the latter's "victory over innatism."⁷⁹ The prescriptively summarized Lockean, reactive view of man is represented in Figure 2.

The popcorn-kernel man, buffeted by the stimulating heat of God's universe, would certainly appear to be congenial to a Calvinist predestinarian like Edwards who had an interest in psychology. It provides the psychological foundation for belief in a God who is omniscient and omnipresent. A growing number of Edwards' modern commentators, however, have expressed the view that the Edwards-Locke psychological

⁷⁷See Will.

⁷⁸Essay, II, i, 2.

⁷⁹Miller, "Sense of the Heart," p. 125; see also Jonathan Edwards, pp. 43-68. Locke's view, of course, is far more complex than a mere "sensationalism," but it is this passive aspect of his thought that Edwards borrowed from him; see Chapter 2, footnote 72.

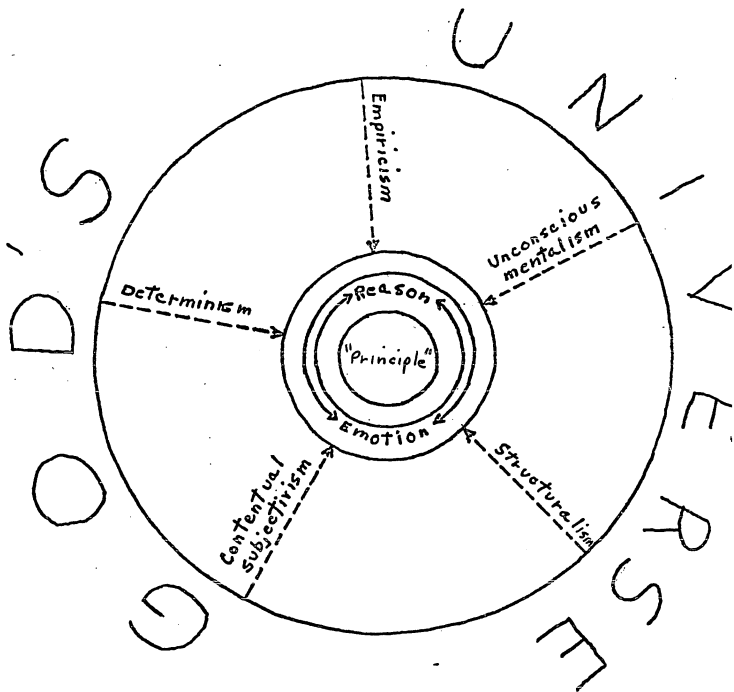


Figure 2. The Edwardsean reactive man. Prescriptions and accompanying arrows indicate that transsumative man is inert until impinged upon by outside stimulation which, in Edwards' view, always originated with God himself.

equation does not tell the whole story.⁸⁰ Edwards' theory, this view holds, claims that man in his relationship with God is proactive as well as reactive; he can initiate activity as well as respond to impinging stimulation. Cherry refers to this paradoxical Edwardsean view as "active-receiving," and the evidence is overwhelming that Edwards did not respond to Locke with Lockean passivity.⁸¹ Edwards appears not to have been a sheet of white paper in his encounter with the Essay; he brought with him an interest in man's "active powers" which he may have gotten from Hutcheson and from the Cambridge Platonists.⁸²

"Active-receiving" is a deceptively-simple phrase. A prescriptive summary demonstrates the extent of the deception, for instead of one paradox there are many; "proactive man" represents a prescriptive inversion of "reactive man."⁸³

⁸⁰See Chapter 2, pp.

⁸¹See Cherry, Theology, pp. 12-24.

⁸²Thomas Hutcheson, An Inquiry into the Original of Our Ideas of Beauty and Virtue (London, 1625); John Smith, Select Discourses (London, 1673). The oddity of a genius like Edwards inhabiting the cultural backwater of mid-eighteenth-century western Massachusetts has aroused a flurry of activity among those who wonder where he got his ideas. Nearly as much as been written on Edwards' "influences" as on Edwards himself. Recent efforts to trace Edwards to his roots may be found in John E. Smith's introduction to the Affections (Thomas Shepard and Solomon Stoddard, chiefly) and Paul Ramsey's introduction to The Will (Locke). Elwood has provided a needed antidote to all this lineal speculation by pointing out that, no matter where Edwards first encountered some of his ideas, he always made creative use of them, thus more attention should be given to explicating what Edwards said; see Elwood, Philosophical Theology, p. 122.

⁸³The presentation of this prescriptive summary is necessarily shorter and more informal than that for "reactive

A view of man as proactive is characterized by (1) Conscious Mentalism, (2) Contentual Objectivism, (3) Indeterminism, (4) Rationalism, and (5) Functionalism.

An organism which initiates activity proactively is, most importantly, decision maker. Man must deal effectively with questions like when, why, and how. The proactive view is, therefore, consciously mentalistic; man must be aware of his mental activity in order to make appropriate decisions. For Edwards, the decision to be made was whether or not to approach God, to prepare oneself for possible conversion. The decision and conversion are both acts, which indicates that the proactive view is further characterized by contentual objectivism and functionalism. Psychological data, therefore, is behavior which is composed of activities that are to some extent a function of the purposes and determination of the individual.

Since, from the proactive point of view, conversion is in part the result of conscious striving and decision making, an individual may decide, on a conscious level, to change the direction in which he is apparently being led by antecedent events. Individuals do make choices and on a strictly-phenomenal level, indeterminism may appear to hold.⁸⁴

man," since it represents what heretofore has been a vaguely-stated point of view, in contrast to the elaborate position outlined in the Edwards-Locke equation.

⁸⁴Edwards, however, claimed that the choices themselves are determined by inexorable motives (liking and disliking, pleasure and pain) built into man, who is thus under a condition of "moral necessity" to be inclined toward that which he likes and away from that which he dislikes; The Will, p. 217.

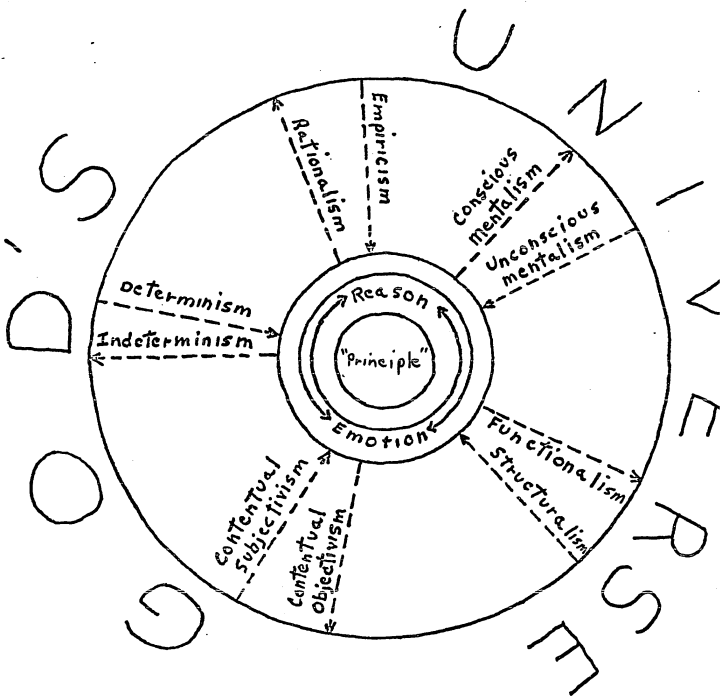


Figure 3. A prescriptive representation of the Edwardsean transsummative, proactive-reactive man.

Finally, man, Edwards' potential convert, is entirely not analogous to a popcorn kernel. Man's decisions concerning what to do must necessarily be based upon decisions regarding which aspects of the stimulation he should attend to. He cannot respond to all of God's unfathomable heat; he must be choosy. This suggests that man has built-in "rules of harmony and regularity" with which he orders his experience.⁸⁵

Recall that virtually no one denies Locke's considerable influence upon Edwards. The "proactive" hypothesis is presented only as a qualification to the Edwards-Locke equation. Edwards viewed man not only as reactive, this view holds, but also as proactive. The extraordinary complexities introduced by this humble amendment are illustrated in Figure 3.

While Perry Miller may have overstated his case when he formulated the Edwards-Locke equation, the proposal has an obvious consistency that the amended version lacks. The neat, comprehensible, Lockean one-way perceptual street is transformed into a confusing, multifaceted conceptual intersection. The usually disjunctive prescriptive polarities are transformed into conjunctions, man is and is not a number of things.⁸⁶

⁸⁵ Jonathan Edwards, The Mind, p. 26.

⁸⁶ Watson also speaks of dominant and counter-dominant prescriptions and this terminology is sometimes used to describe the psychological tendencies of an era. Sometimes a position transcends the prescriptive polarities. Logical Empiricism, for instance, may be viewed as an attempt to find a satisfactory middle ground between Rationalism and Empiricism. See Watson, "Prescriptive Science."

Edwards and the Synthetic Tradition in
the History of Psychology

If it is true that Edwards' view of man was Transsummative-proactive-reactive, and it appears certain that it was, it is apparent that his integration lacks unifying principles. To paraphrase Robert Browning, Edwards' reach for a unified view of human psychology clearly exceeded his own profound grasp of the psychological concepts available to him. The use of the Fundamental Issues--Prescriptive Theory analysis opens a Pandora's box of theoretical inconsistencies and complications.

Is Edwards' view of psychology unique? From a historical perspective, does he alone defend a view which characterizes man as a rational-emotive unity? If he truly stood alone, his psychology would probably never be understood except in an artificial sense within the context of an ad hoc model out of thin air and a historian's imagination.

Fortunately, rather than being a historical oddity, Edwards' psychological theory is part of a long tradition, a synthetic tradition, in the history of psychology. A number of other thinkers, it turns out, have attempted the same sort of prescriptive syntheses sought by Edwards: a view of man who is transsummative, proactive, and reactive.⁸⁷ Two of the synthetic positions which will be discussed briefly, that of Augustine and John Dewey, contain a "bohemian" component

⁸⁷This is not a Boringian causative tradition, but a Brettian affinitive tradition. "Influence" is not an issue.

similar to that in Edwards: no one has ever determined with finality what, exactly, these theorists were trying to say. Like Edwards, their visionary reach exceeded their theoretical grasp. A third and contemporary view, information processing, reaches as far as the others but with a much-surer grasp. While Augustine, Edwards, and Dewey held that man is transsumative, proactive, and reactive, information-processing theorists have constructed concrete models which demonstrate how such a complex man might function. The model, or models, will be presented in detail in Chapter 3. The discussion which follows in this chapter is designed to provide a common context for Edwards and information processing as a justification for the presentistic application of the prescriptively similar but more explicit and coherent contemporary view to Edwards. Information-processing theory, in other words, will provide the integrative whole into which prescriptive particulars may be placed as a vehicle to promote understanding of Edwards' complex psychological theory.

The reader is now asked to endure a rather lengthy and redundant series of quotes in which Augustine, Dewey, and contemporary information-processing theory are seen to express views which are nearly identical to Edwards: man as transsumative and as proactive-reactive. Although Augustine did influence Edwards, and Dewey has had considerable impact upon information-processing theory, the elucidation of historical influence is not at issue here. The point is that for almost sixteen hundred years certain visionary individuals, including

Edwards, have held a unified, prescriptively-paradoxical view of man which defied concrete description. Information-processing theory differs from the other unified views only in its conscious attempt to construct models which are capable of explaining how a transsumative, proactive-reactive man might function.

Augustine, like Edwards, expressed his psychological views almost entirely within the framework of Christian theology and the conversion experience. It is God's universe that must be actively received:

'Seek ye God, and your soul shall live" (Ps. lxxviii, 33). It is because He is hidden that he must be sought in order to be found; and being found He must still be sought because of His immensity . . . For He satisfies the seeker in the measure of his capacity and He makes the finder to have greater capacity so that he may again⁸⁸ seek to be filled when his ability to receive has grown.

"Faith seeks," said Augustine, "understanding finds."⁸⁹ That is, there is a reciprocal relationship between a passive cognitive faculty which receives, and faith, or the Will-affections which actively seeks God. Only if cognition is supplemented by the emotions, or what Augustine called "love," is cognition full or complete. Full cognition, therefore, is re-cognition.⁹⁰ Knowledge can never be disassociated from

⁸⁸In Joanis Evangelium tractatus, LXIII, i; in Erich Przywara, ed., An Augustine Synthesis (New York, 1958 pp. 75-76.

⁸⁹De Trinestate libri quindecim, XV, ii, 2; Ibid., p. 77.

⁹⁰The use of the term re-cognition to describe Augustine's proactive-reactive position derives from Robert E. Cushman, "Faith and Reason," in Roy W. Battenhouse, ed.,

love, or will, which transforms vague awareness into sharp, full cognition.

Augustine's use of faculty terminology is misleading. The proactive (faith) and reactive (understanding) aspects of man appear, in certain passages to correspond to Aristotelian "faculties" of the soul. Yet, as with Edwards, the terms are used in a conjunctive rather than a disjunctive sense.

Since, therefore, memory, understanding, will, are not three lives, but one life; not three minds but one mind; it follows as a certainty that they are also not three substances, but one substance . . . And hence these three are one, in that they are one life, one mind, one essence, and whatever else they are severally called in respect to themselves, they are called also together, not plurally, but in the singular number.⁹¹

In short, man is transsumative, possessed of different, but inseparably-related capacities.

It is difficult to say whether John Dewey, writing fifteen hundred years after Augustine and one-hundred-fifty years after Edwards, had significantly clarified the synthetic view of man beyond the clumsy attempts of Augustine and Edwards.⁹² It is even hard to determine whether Dewey had successfully removed the issue from its original theological context, for Dewey's early expressions of the synthetic viewpoint were strongly influenced by Leibniz and

A Companion to the Study of St. Augustine (New York, 1955), pp. 287-314.

⁹¹De Trinitate libri quindecim, in Przywara, ed., Augustine, p. 148.

⁹²See Chapter 2, pp. 42-49 for representative expressions of Edwards' transsumative ("sense of the heart") and proactive-reactive views.

carried noticeable traces of the Hegelian world spirit.⁹³

Dewey's admiration for Leibniz was in large measure due to their common attempt to portray man and the universe as an "organic unity."

The difficulty of Locke is the difficulty of every theory of knowledge that does not admit an organic unity of the knowing mind and the known universe.⁹⁴

Strictly speaking, sensation is an activity of the mind. There are no windows through which the soul receives impressions. Pure passivity of any kind is a myth, as scholastic fiction.⁹⁵

"Organic unity" implies a reciprocal relationship between man and the environmental sources of his stimulation. Dewey thus sought to alter the level of analysis from the stimulus-response concept of the reflex arc, to one which viewed stimulus and response as part of an entire purposive act which necessarily contains proactive and reactive components.⁹⁶

In any functional act, both the intellect and the emotions are involved, and they function as a unity. For

⁹³In his review of Dewey's Psychology, G. Stanley Hall severely criticized Dewey for twisting psychological facts until they fit "the [Hegelian] system which is far more important than they"; American Journal of Psychology, 1887, 1, p. 157.

⁹⁴Leibniz's New Essays Concerning the Human Understanding in Jo Ann Boydston, ed., The Early Works of John Dewey, I. (Carbondale, Ill., 1969), pp. 253-435. (1888) Dewey later enlarged on this theme in John Dewey and Arthur F. Bentley, Knowing and the Known (Boston, 1949).

⁹⁵Leibniz's New Essays, p. 319.

⁹⁶"The Reflex Arc Concept in Psychology" in Boydston, ed., Early Works, V, pp. 96-109. Dewey also makes this point in How We Think, rev. ed. (Boston, 1933). He states, "The nature of the problem fixes the end of thought and the end controls the process of thinking." (p. 15).

instance, if a man encounters a bear

. . . we have but the one organic pulse, the frightful bear, the frightened man, whose reality is the whole concrete coordination of eye-leg-heart, etc., activity, and that the distinction of cold intellectuality and warm emotionality is simply a functional distinction within this whole one of action.⁹⁷

Thus, not only is man's relationship to the universe a proactive-reactive organic unity, but the various functional components within man also operate as an organic unity.

Feeling, knowledge, and will are not to be regarded as three kinds of consciousness, nor are they three separate parts of the same consciousness. They are three aspects which every consciousness presents, according to the light in which it is considered; whether as giving information, as affecting the self in a painful or pleasurable way, or as manifesting an activity of self. But there is still another connection. Just as in the organic body the process of digestion cannot go on without that of circulation, and both require respiration and nerve action, which in turn are dependent upon other processes, so in the organic mind knowledge is not possible without feeling and will; and neither of these without the other two.⁹⁸

As an expression of transsummative man, this statement is neither more nor less clear than either Augustine's or Edwards'. While Augustine and Edwards spoke of "one essence," and "a sense of the heart," respectively, Dewey's "organic mind" offers little in addition except physiological metaphors. Dewey's revised concept of the reflex arc, however, is clearly an attempt to provide a model which can describe the precise manner in which man functions as a proactive-reactive unity. It was his goal to transform the

⁹⁷"The Significance of Emotions," in Boydston, ed., Early Works, IV, pp. 169-188. (1895)

⁹⁸Psychology (New York, 1886), pp. 17-18.

notion of the reflex arc from the age-old conception of "a mechanical conjunction of unallied processes" to one in which

sensory stimulus, central connections, and motor responses shall be viewed, not as separate and complete entities in themselves, but as divisions of labor, functioning factors, within the single concrete whole, now designated the reflex arc.⁹⁹

Dewey's "reflex arc" paper was an inspiration for the developing school of American psychology known as functionalism. The "Organic Mind" and "the reflex arc" were adopted, in one form or another, by the leading functionalists, including Dewey, James, Angell, and Carr.¹⁰⁰ They carried these synthetic principles with them in their battle with behaviorism.

American behaviorism has always represented the quintessence of parsimony; an experimental application of the old adage "believe nothing of what you hear and only half of what you see." Since neither minds nor introspective reports concerning minds can be seen (that is directly observed), transsumative man became a dead issue. Man's mind is unknowable; he simply behaves, and this behavior is reactive--an organism responds to a stimulus.¹⁰¹ The

⁹⁹"Reflex Arc," p. 97.

¹⁰⁰James was not, strictly speaking, a member of any school of psychology but he was in substantial agreement with Dewey's transsumative and proactive-reactive principles; see James, Principles I, pp. 221-223 for James's discussion of "knowledge of acquaintance," a concept very similar to "sense of the heart" and "organic mind." See also I, pp. 7-11 for James's position on the proactive-reactive principle, especially his "Romeo and Juliet" illustration.

¹⁰¹The combination of reactive man and anti-mentalism reached a kind of model-building zenith in Clark L. Hull's drive-reduction theory. See Principles of Behavior (New York, 1943).

simplicity of the stimulus-response model, together with experimental successes, soon assured behaviorism the dominant position in academic psychology. It appeared, for a while, as if the synthetic tradition within academic psychology would never progress beyond the still-mostly intuitive "organic mind" and the slightly-more explicit "reflex arc" of the functionalist school.

The synthetic theorists, from Augustine to Dewey, were too timid. Their excursions into model building were always tentative and conjectural. Yet their timidity was legitimate; unlike the behaviorists they could not see what they were talking about, they could only guess, and seldom were two guesses in complete agreement. When psychological model building reached an unprecedented peak in the first half of the twentieth century the synthetic tradition, badly in need of an explanatory model, was ignored, although the Europeans Bartlett and Piaget continued to postulate mental constructs called "schemata."¹⁰²

Recently, however, a remarkable series of events has breathed new life into the synthetic tradition. Synthetic theorists now have the confidence to build comprehensive, working models of proactive-reactive and transsummative man because of the invention and development of electronic computing machines, and especially the area known as "simulation."

¹⁰²Frederick C. Bartlett, Remembering (Cambridge, Eng., 1932); Jean Piaget, Judgement and Reasoning in the Child, trans. by M. Warden (New York, 1926).

In fact, computers can do far more than add numbers; they can recognize complex patterns, solve difficult logical problems, and even imitate many of the idiosyncracies of human personality.¹⁰³ Importantly for the psychologist, it cannot only be observed that computers, and, by implication, men, accomplish these feats, but how. Thus, while the synthetic theorist cannot see into man any more clearly than Augustine, Edwards, or Dewey, he can observe the machinery and functioning of devices which are in many respects, very man-like. He can build models which, like those of the behaviorists, have observable referents.

. . . the "program analogy" (which may be a better term than "computer analogy") has several advantages over earlier conceptions. Most important is the philosophical reassurance which it provides. Although a program is nothing but a flow of symbols, it has reality enough to control the operation of very tangible machinery that executes very physical operation.

. . . what kind of a thing is a schema? If memory consists of transformations, what is transformed? So long as cognitive psychology literally did not know what it was talking about, there was always a danger that it was talking about nothing at all. This is not longer a serious risk. Information is what is transformed, and the structured pattern of its transformation is what we want to understand.¹⁰⁴

This is hardly a timid or speculative statement, it is a manifesto. Cognitive psychology is a model building, and as we shall see, a synthetic exercise with an observable base.

Information, that which facilitates choice by narrowing alter-

¹⁰³See W. Sluckin, Minds and Men (London, 1959) for a review of the early work in simulation and Michael J. Apter, The Computer Simulation of Behavior (New York, 1970) for a careful yet very readable review of recent work in the field.

¹⁰⁴Ulric Neisser, Cognitive Psychology (New York, 1948). p. 8.

natives, is processed by equipment which can be seen as well as heard. The information processing point of view, as the computer program analogue to human cognition is generally known, is the first synthetic psychology to provide explicit models of transsumative and proactive-reactive man. A detailed presentation of the models is given in chapter four and applied to Edwards' synthetic but vague psychological theory in chapter five. It is enough here simply to indicate the manner in which synthetic principles are expressed in the language of information processing.

Man's relationship to the universe is included in the "cybernetic hypothesis," his encounter with the world is best described as a proactive-reactive "feedback loop."¹⁰⁵ Man is said to Test-Operate-Test-Exit (TOTE). This fundamental unit of analysis is actually a more confident, explicit, computer-based model of Dewey's revised conception of the reflex arc (Figure 4).¹⁰⁶

Incoming information is received and if some imbalance or incongruity (similar to Locke's principle of "uneasiness") is perceived, control is exerted in the form of an operation to correct the imbalance. Information is then fed back from the operation, if the incongruity has been erased, the individual exits from the loop. Proactive control alternates with

¹⁰⁵Norbert Wiener, Cybernetics (New York, 1948).

¹⁰⁶George A. Miller, Eugene Galanter, and Karl H. Pribram, Plans and the Structure of Behavior (New York, 1960).

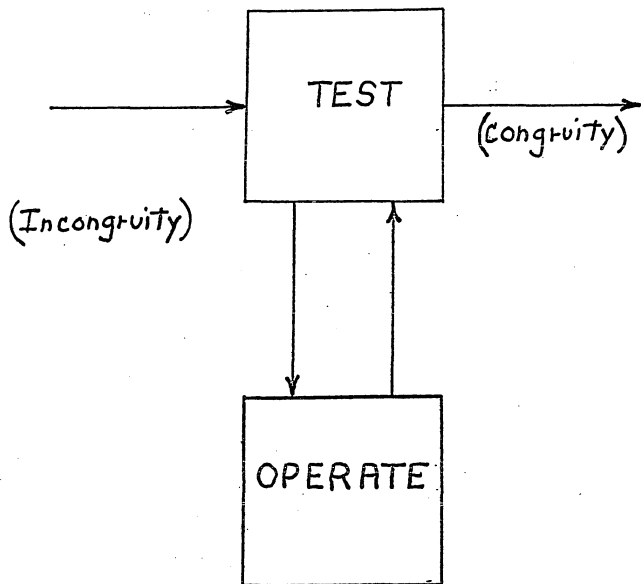


Figure 4. A simple feedback loop, or TOTE unit.

reactive reception of information until harmony is achieved.

Transsummative man, a rational-emotive unity, is contained in the hypothesis of multiple processing.¹⁰⁷ It is held that there are two kinds of mental organization, one rational and one emotional. Rational functioning is held to be analogous to the operation of a sequential computer program which "makes only those tests which are appropriate in the light of previous test outcomes."¹⁰⁸ Emotional or irrational activity, on the other hand, is comparable to the operation of a parallel computer program which "carries out many activities simultaneously, or at least independently."¹⁰⁹ The sequential program has many of the attributes of the human "stream" of consciousness, while the parallel program resembles what is known of the chaotic unconscious. Importantly, in man these sequential and parallel programs are said to function as a complex, integrated, unpredictable unit.

. . . human thinking is a multiple activity. Awake or asleep, a number of more or less independent trains of thought usually coexist. Ordinarily, there is a "main sequence" in progress, dealing with some particular material in step-by-step fashion. The main sequence corresponds to the ordinary course of consciousness. It may or may not be influenced by the other processes going on simultaneously. The concurrent operations are not conscious, because consciousness is intrinsically single.¹¹⁰

¹⁰⁷ See Neisser, Cognitive Psychology, Chapt. 11, and "The Multiplicity of Thought," British Journal of Psychology, 1963, 54, 1-14.

¹⁰⁸ Neisser, Cognitive Psychology, p. 297.

¹⁰⁹ Ibid., p. 197.

¹¹⁰ Neisser, "Multiplicity," p. 8.

The principal function of this unconscious activity is, according to Freud, to find discharge for emotions which are striving for expression in our minds.¹¹¹ Thus all conscious "rational" mental activity is influenced by unconscious emotional activity.

The Synthetic psychological viewpoints which have been discussed, and their respective expressions of the synthetic principles are summarized in Table 3.

In contrast to what many of his commentators believe, Edwards' psychological views have some historical company. From at least the time of Augustine, a select group of thinkers have tried to describe their vision of a man at one with himself and with the universe. Unfortunately, these psychological descriptions have been only indifferently successful, and historians' efforts to interpret synthetic psychology have resulted in failure. The thinkers themselves can hardly be blamed for the confusion because they lacked adequate raw intellectual materials. Augustine, Edwards, and Dewey were forced to use the faculty language, hardly the ideal vehicle for expressing unified conceptions of anything. Historians of Edwards' psychological theory, however, have

¹¹¹ Sigmund Freud, The Interpretation of Dreams (New York, 1923). Neisser seeks to transform the Freudian concepts, primary and secondary process thinking, into information processing concepts (parallel and sequential, respectively) which are derived from observations of computer hardware. It also represents an attempt to discuss Freud in a cognitive rather than a strictly motivational context; see Neisser, Cognitive Psychology, pp. 3-11, for a clarification of "the cognitive approach."

TABLE 3

SOME EXAMPLES OF THE SYNTHETIC PRINCIPLES

Theorist	Transsummative Man	Proactive-Reactive Man
Augustine	"one life, one mind, one essence"	"re-cognition"
Edwards	"a sense of the heart"	"Active Powers"-- Lockean Passivity
Dewey	"Organic Mind"	"Reflex Arc"
Information Processing	"Multiple Processing"	"Feedback Loop"

been sloppy; they have not bothered to define the history of psychology in a way that places him in a context. They have been content merely to praise his uniqueness and lament his fate. Edwards has now been placed in a psychological context; a prescriptive analysis of his views demonstrated the immensity of his dilemma and the need for a model to explain how man can be so utterly diverse as the synthetic theorists claim.

CHAPTER IV

AN INFORMATION-PROCESSING MODEL OF HUMAN THINKING AND BEHAVIOR

In spite of proactive-reactive and transsumative similarities which place them in a common synthetic tradition, Edwards and contemporary information-processing theorists seem, on the surface, to be worlds apart. Edwards' world was abstract in the extreme, populated by deities, devils, angels, saints, and sinners. He yearned for the day when he would join his colleagues in supernatural communion in the next world. The information-processing theorists, on the other hand, hold a view which is thoroughly mechanistic. Their world is chiefly one of the concrete gadgets, programs, and printouts that characterize their computers whose yearnings, if computers can be said to yearn, would certainly not be directed toward the Calvinist God but rather toward an oil can which never runs dry or perhaps an infinitely long piece of magnetic tape. The aspirations and fate of the theorists themselves remains, of course, an open question, although many would undoubtedly feel more comfortable alongside their machines than in the presence of Edwards' God.

The mechanistic attitude is displayed in both the proactive-reactive and transsumative aspects of the information-processing approach. Most information-processing

theorists believe, following Norbert Wiener, that functioning cybernetic systems need not even be alive.¹ God (for centuries past) or nobody in particular (after Darwin) has set up systems, ranging from the molar universe down to molecular biology and atomic physics, which run on a homeostatic principle.² An organism always seeks to satisfy a need and when equilibrium is achieved, it will rest until a need is again manifest. The thesis of much contemporary and motivational psychology is that one of man's basic needs is to organize, manipulate, understand, and control his environment.³ Man must plan, seek and receive information relevant to his plan, execute the plan, and evaluate the extent to which the plan has been successfully executed. Lifelong planning is as inescapable as death; it is an incontrovertible fact of human nature.

The human race at times appears to be such a rational lot. We TOTE our plans here and there, testing, operating, testing, and eventually exiting from our various loops. If man were only a TOTE-er, however, he would be as dull and predictable as the computers he is alleged to resemble

¹ Wiener, Cybernetics.

² Loren Eiseley has described in a lucid and compelling fashion the manner in which multifaceted nature became detached from the God hypothesis; see Darwin's Century (New York, 1958). It might almost be contended that the time is ripe for the re-invocation of a modified God Hypothesis, now that man has created cybernetic "thinking" machines.

³ The classic statement of this position is Robert W. White, "Motivation Reconsidered: The Concept of Competence." Psychological Review, 1959, 66, 297-333. Early research on

intellectually. Yet except under extreme or trivial circumstances, human thinking and activity is characteristically unpredictable. Why? Chiefly, say the information-processing theorists, because of the exasperating human propensity to choose what we like from among alternatives without actually knowing what we like. The choices may be considered or fickle but in either case they involve discarding or not attending to what is perceived as irrelevant or unpleasurable stimulation.⁴ The conscious and/or unconscious selection of alternatives is said to be based on emotional considerations. The choices are a function of the total conscious and unconscious history of the organism which, if known (as, of course, it can never be), might permit exact prediction of a person's next plan and mode of executing it.

Jonathan Edwards: A Computerized Theologian?

How can such utter mechanism be reconciled with Edwards' insistence that man operates within a moment-to-

"competence" motivation came from the primate laboratory of Harry F. Harlow; see Harlow's "Mice, Monkeys, Men, and Motives," Psychological Review, 1953, 60, 23-32, and R. A. Butler, "Discrimination Learning by Rhesus Monkeys to Visual Exploration Motivation," Journal of Comparative and Physiological Psychology, 1953, 46, 95-98.

⁴Few computer simulators have taken Neisser's cogent criticism seriously. He has maintained that all human thinking is motivated, often by emotionally-laden desires that are unconscious, i.e., outside the focus of attention. See his "The Imitation of Man by Machine," Science, 1963, 139, 193-197, and Cognitive Psychology, Chapter 11. Those information-processing-theorists who have attempted to incorporate emotion into their programs have generally treated it as an "interrupting mechanism," rather than as an aspect of cognition which is thoroughly integrated with all intellectual

moment dependence upon God?⁵ In fact, in many respects, the two views are very similar. Neither scheme can account for or predict much of the immense variability in human thinking and acting. Edwards and the information-processing theorists generally present the motivational determinants of cognition and behavior in the form of excuses for their ignorance of those determinants. Who, asks Edwards, can pretend to apprehend God's will in its totality?

In these [spiritual] things, men that are prudent for their temporal interest, act as though they were bereft of reason: "They have eyes and see not; ears and hear not; neither do they understand: They are like the horse and Mule, that have no understanding" (Mark 8:18, Ps. 32: 9). (Jer. 8:7), "The stork in the heaven knoweth her appointed times; and the turtle, and the crane, and the swallow, observe the time of their coming: But my people know not the judgement of the Lord."

. . . And how can these things be accounted for, but by supposing a most wretched depravity of nature?⁶

It is man's condition of original sin which prevents him from

activity. See especially Herbert Simon, "Motivational and Emotional Controls of Cognition," Psychological Review, 1967, 74, 29-39. Programs which have this sort of "emotional" factor built into them include Walter Reitman's "Argus" (Cognition and Thought: An Information Processing Approach, New York, 1965) and J. C. Loehlin's "Aldous" (Computer Models of Personality, New York, 1968). Although computerized "emotion" of this sort does interrupt and select, it does not, according to Neisser, do even remote justice to the complex, mostly unconscious nature of most emotional attraction and repulsion.

⁵This aspect of Edwards' thought has been elaborated by Paul Conkin, Puritans and Pragmatists (New York, 1968), Chapter 2, and David Lyttle, "Jonathan Edwards on Personal Identity," Early American Literature, 1972, 8(2), 163-171. The clearest demonstration of Edwards' belief in utter and complete dependence upon God is contained in his History of the Work of Redemption, in S. E. Dwight, ed., Works, III, pp. 165-436. In this unfinished opus Edwards attempted to explain the entire history of the world, in Toynbee-like fashion, as the expression of God's personal handiwork.

⁶Original Sin, ed. by Clyde A. Holbrook (New Haven, 1970), pp. 155-156. (1758)

complete understanding of God's will, and hence, of himself.⁷
 No one, claims Ulric Neisser, a leading information-processing theorist, can hope to understand completely the remarkably complex intermingling of conscious and unconscious processes which together form the "main sequence" of consciousness.

The existence of more than one process implies that the main sequence may be altered in "unpredictable" ways at almost any moment. The change will usually be away from immediate adaptation to the external world and toward an emphasis on inner needs.⁸

At this moment I do not know, exactly, what the next sentence on this page will be because I am not aware of the nature and strength of many personal inner needs. Like the will of Edwards' God, the human mind is far too complex and man's discerning power much too inadequate to permit a person's thoughts and actions to be described ahead of time in a personalized, ideo-motor itinerary.

Edwards and the information-processing point of view not only hold proactive-reactive and transsummative principles in common, each also acknowledges the essential unpredictability of human thinking and action. Edwards sought, somewhat arrogantly perhaps, to use his knowledge of the

⁷At one point Edwards hinted that the mechanism of depravity is a sort of cognitive laziness combined with the extraordinary complexity of the divine stimulation.

Those ideas which do not pertain to the prime essence of things--such as all colors that are everywhere objected to our eyes; and sounds that are continually in our ears; those that affect the touch as cold and heat; and all our sensations--exceedingly clog the mind in searching into the innermost nature of things.
 (The Mind, p. 35).

⁸"Multiplicity of Thought," pp. 9-10.

psychology of mortals as a stepping stone to insight into God's will. Modern cognitive psychologists, distrusting supernaturalist "explanations," concern themselves with man's mind as an end in itself. Each view, however, is offered as an attempt to unravel the old dilemma of St. Paul who, like most of us, often had difficulty understanding his thoughts, his plans, his behavior and the relationship between each of them.

For that which I do I allow not; for what I would that I do not; but what I hate, that do I. If then I do that which I would not, I consent unto the law that it is good. Now then it is no more I that do it, but sin that dwelleth in me. . . . I find then a law, that, when I would do good, evil is present with me.⁹

Here in a theological nutshell lay a central problem in the history of psychology: the relationship between motivation, cognition, and action. "How," ask Miller, et al. pointedly "in the name of all that is psychological should we put the mind, the heart, and the body together?"¹⁰

Edwards had the remarkable insight that such a synthetic enterprise was actually necessary. But Edwards did not know how this might be accomplished. He only knew that human functions which were alleged to be separate and independent were really not that way at all. Contemporary information-processing theory has taken up the synthetic principles where Edwards left them. They have constructed some fascinating models which demonstrate how a proactive-reactive,

⁹Romans 7:15-17; 21 (King James Version).

¹⁰Plans, p. 71.

transsummative rational-emotive man might function. The principal difference, of course, between Edwards' theory and information processing is that Edwards looked through man in search of the first cause while the information-processing point of view attributes human thinking and behavior to the more mundane, but hardly less mysterious human mind.¹¹

For a long while after the behavioristic revolution in American scientific psychology, speculation concerning complex, interesting, "inner mental processes" slowed to a trickle.¹² For a variety of reasons, including squabbling among the introspectionists, the utter simplicity of behavioristic "theory," and the flamboyant leadership of John B. Watson, behaviorism quickly became the dominant school of American psychology.¹³ During this era, from approximately

¹¹Theoretically, Edwards stands on firmer ground than information-processing theorists in the area of motivation. For Edwards, God was at the root of it all. Contemporary cognitive theorists, on the other hand, have simply thrown up their hands; motivation is simply treated as an "independent variable" in cognition research. "Thus," Neisser points out, it is no accident that the cognitive approach gives us no way to know what the subject will think of next. We cannot possibly know this; unless we have a detailed understanding of what he is trying to do and why. (Cognitive Psychology, p. 305).

¹²In 1913, John B. Watson first drew the battle lines between his cause, behavior, and the "introspectionists," or those who purported to be seeking the elements of the human mind; see "Psychology as the Behaviorist View it."

¹³See Boring, History, pp. 620-663, and R. I. Watson, Great Psychologists, pp. 406-435, for surveys of the rise of behaviorism. For an interesting "inside" view of the early days of behaviorism consult J. B. Watson's short autobiography in Carl Murchison, ed., A History of Psychology in Autobiography, III, (Worcester, Mass., 1936), pp. 271-281.

1920 to 1950, American psychology truly lost its mind; speculation about mental processes was almost non-existent.¹⁴

Late in this period Donald O. Hebb made a valiant attempt to prod his colleagues into a reconsideration of central processes and the nature of thought.¹⁵ Although Hebb's complex theory of neural-phase sequences and cell assemblies has stimulated the research of an entire generation of physiological psychologists, much of this research has remained inconclusive.¹⁶ Walter R. Reitman has outlined the difficulties encountered by those whose research is based on Hebb's model of central processes, and the manner in which an information-processing approach can solve a number of these problems.

It should be clear that the use of information processing programs . . . enables us to state and explore systems of psychological constructs in a manner not possible either with theories framed in words or with direct experimentation. With verbal models, it is practically impossible to be sure that conclusions follow only from explicit assumptions and that they in no way depend upon "unprogrammed" elements entering formally into the argument.

¹⁴Of course, Gestalt psychology and Psychoanalysis acknowledged the importance of the mind but they were European imports which were regarded with suspicion. Edward C. Tolman was a notable exception among American behaviorists in that he emphasized the importance of mental constructs which he called "cognitive maps;" see "Cognitive Maps in Rats and Men," Psychological Review, 1948, 55, 189-208. A short historical review of the death and rebirth of interest in the mind among American psychologists may be found in Robert R. Holt, "Imagery: The Return of the Ostracized," American Psychologist, 1964, 19, 254-264.

¹⁵The Organization of Behavior (New York, 1949).

¹⁶Hebb has discussed and reviewed research on his model in "The American Revolution," American Psychologist, 1960, 15, 735-745 and in his Textbook of Psychology, 3rd edition (Philadelphia, 1972), pp. 56-94.

With laboratory experiments, we cannot get a test of the theory in and of itself. We must settle for a test of the theory taken together with all the assumptions about manipulations, measures, and conditions that couple the theory by means of operational definitions to the real world. If unexpected results occur, we are unable to say whether the difficulty is in the theory, the ancillary assumptions, or both. In an information-processing model, we can state, manipulate, and deduce implications from our theories in a way that is at once sure, unambiguous, and yet independent of operations relating the theory to data on human behavior.¹⁷

One might object to Reitman's enthusiastic, blanket endorsement of the information-processing approach on the grounds that virtually nothing ties the analogue (the machine) to the phenomenon that is to be explained (the human mind). From a skeptic's point of view, information-processing psychology might resemble a metaphorical game played by frustrated poets that goes something like: "How might the mind be like a computer? Let us count the ways!" The mind-machine analogy, in other words, is just an analogy. Yet, as virtually all information-processing theorists are eager to point out, the computer analogies, unlike all previous mind models, is composed of hard, functioning, real stuff. The information-processing psychologist can not only avoid getting bogged down in the interminable warfare over proper experimental designs, demand characteristics, etc., his machines can be observed to do many things which humans can also do. Computers can be programmed to solve problems in symbolic

¹⁷ Cognition and Thought, p. 14. It might be said that Hebb's theory has been "framed in experiments," while Edwards' theory is "framed in words." Each type, according to the information-processing point of view, can benefit from a concrete computer analogue.

logic, play chess, and recognize perceptual patterns.¹⁸ It is interesting, therefore, to determine by what mechanisms machines can most efficiently accomplish human-like activities, and to speculate that, just maybe, humans also process information in a similar fashion.

In order to transform computer technology into psychology some attempt must be made to investigate human cognition, characterize it, and compare it to information-processing models. Do the available data on human cognition and behavior indicate that the basic mind-machine analogy is reasonably appropriate? In order to answer this question, the information-processing theorists must combine enthusiasm for experimentation on human subjects with extensive knowledge of computer programming. They must bring themselves to apply the principles derived from their clean machines to the messy arena of human thinking and behavior. Three such individuals, George A. Miller, Eugene Galanter, and Karl H. Pribram, have demonstrated that the computer analogue is a very heuristic device which provides a coherent model for

¹⁸ Allen Newall, J. C. Shaw, and Herbert Simon programmed their "Logical Problem Solver" to solve the symbolic logic problems in Russell and Whitehead's Principia Mathematica. See "Elements of a Theory of Human Problem Solving," Psychological Review, 1958, 65, 151-166. A. D. DeGroot's analysis of Chess is compatible with information-processing theory; see Thought and Choice in Chess (The Hague, 1965). Oliver Selfridge and Ulric Neisser have programmed a computer to recognize a wide variety of shapes such as the letter "A"; see "Pattern Recognition by Machine," Scientific American, 1960, 203, 60-68.

much of what humans think and do.¹⁹ Their unit of analysis, the TOTE unit, is compelling, and the analogue from which it is derived, the cybernetic information-processing machine, really is and does something.

As they have attempted to establish the legitimacy and develop the potential of the mind-machine analogy, the expositions of many information-processing psychologists have become increasingly esoteric. To the uninitiated, their semi-official organ of publication, Cognitive Psychology, probably bears a closer resemblance to an astrological ephemeris than to recognizable discussions of the human mind.²⁰ While the details of computer programming and simulation of human processes may be obscure, their general principles are not. The proactive-reactive principles of the information-processing approach have never been elaborated more clearly than they were by Miller et al.'s elaboration of the TOTE unit. This clarity is one reason why their discussion provides much of the substance of the summary account which follows below of the proactive-reactive aspect of information-processing psychology.

¹⁹ Plans; see below, section 2. Since 1960, there has not been a book written on cognitive psychology which does not derive, in part, from this extremely seminal work.

²⁰ Cf. the monograph by Terry Winograd, "Understanding Natural Language, . . ." Cognitive Psychology, 1972, 3, 1-191. Like the whereabouts of the mythical Captain Zero, the contents of this study must be truly "known" only to a few in the outside world."

The other, more obvious, reason for focusing on the basic proactive-reactive TOTE unit, along with Neisser's transsumative model, is that this essay is conceived as an exercise in historical interpretation. It is essentially concerned with Jonathan Edwards' view of man as it was expressed in his cognitive theory. What is needed, therefore, is an approach to information processing which emphasizes the model of man implied in it: in essence a philosophical approach to information processing. The thesis is that since Jonathan Edwards and contemporary information-processing psychologists each holds that man is a proactive-reactive and rational-emotive unity, it is appropriate to apply the clearer and more explicit modern terminology to Edwards' views.

The attempt made here to map a contemporary psychological scheme onto a historical theory might be considered an intellectual historian's counterpart to psychohistory. It is the psychohistorian's task, usually, to interpret the behavior of some famous and enigmatic historical figure within the framework of revised, Eriksonian psychoanalytic theory.²¹

²¹ Although Freud did write history from a psychoanalytic point of view, the term "psychohistory" is closely associated with Erik H. Erikson. See especially Young Man Luther and Ghandi's Truth. The life of Jonathan Edwards has been psychoanalyzed in two related fascinating studies by Richard Bushman. In "Jonathan Edwards and Puritan Consciousness," Journal for the Scientific Study of Religion, 1966, 5, 383-396, Bushman's use of psychoanalytic theory is very vague and the notion of a Puritan Consciousness must remain a mystery because of the author's failure to discuss the meaning of some general "consciousness." See also Bushman's "Jonathan Edwards as Great Man: Identity, Conversion, and Leadership

It is contended by psychohistorians that certain psycho-analytic insights, especially "identity crisis," help to explain the behavior of these interesting individuals.²² In this essay, a significant contemporary psychological theory, information processing, is used to explain not the personal behavior but the intellectual formulations of a historical figure. The whole exercise is conceived as an attempt to place a set of seemingly rather odd and quaint ideas into a context which permits their psychological significance to become comprehensible to contemporary readers.

Two standard criticisms of psychohistory are also pertinent to the current endeavor and these need to be considered. First, it has been pointed out that the perceived credibility of psychohistorical research is largely a function of one's devotion to revised psychoanalytic theory.²³ If one does not believe in the existence of identity crises, for

in the Great Awakening," Soundings: An Interdisciplinary Journal, 1969, 52, 15-46. This article represents an attempt to transpose the Eriksonian model onto Edwards' early life and later writing.

²²The classic statement of "identity crisis" is in Erikson's Identity, Youth, and Crisis (New York, 1968).

²³A sarcastic, even bitter, but very literate attack on the concept of psychohistory is that of Jacques Barzun, "History: The Muse and Her Doctors," American Historical Review, 1972, 77, 36-64. Barzun asks a very pertinent question:

Why is psychoanalysis in its broadest sense the only psychology favored by the psycho-historian? . . . Certainly there is no warrant for believing that only psychoanalysis can show results in the study of personality (p. 50). The point of view of the psychohistorians is specifically defended by Robert Jay Lifton, "On Psychohistory, in Herbert Bass, ed., The State of American History (New York, 1970),

instance, it is unlikely he can be convinced that he has a deeper understanding of Luther because he is informed that Luther had an identity crisis. This criticism is both fair and unfair. It is fair because, of course, there are virtually an infinite number of ways to interpret theoretically a piece of behavior. Why not, it might be asked, employ a Jungian, or Adlerian, or Sullivanian, or existential interpretation? After all, psychoanalytic theory has fallen upon hard times within clinical psychology and personality theory, so why should historians adopt it unquestioningly?²⁴ Yet the criticism is also unfair. Traditionally, historians have operated as though they inhabited a methodological vacuum when in fact they have not. They have simply chosen to remain blissfully ignorant of their biases.²⁵ An important

and by the contributors to Bruce Mazlish, ed., Psychoanalysis and History, 2nd edition (New York, 1971).

²⁴Psychotherapy no longer requires the famous couch or references to mysterious, unconscious drives. Many contemporary theorists and therapists focus on the conscious goals and purposes of a patient rather than aboriginal id forces; cf. Carl Rogers, On Becoming a Person (Boston, 1961), George A. Kelly, The Psychology of Personal Constructs, 2 Vols. (New York, 1955), and Albert Ellis, Reason and Emotion in Psychotherapy (New York, 1962). Behavioristic clinicians, on the other hand, see no need to ask a patient about either his conscious or his unconscious processes; cf. Joseph Wolpe, The Practice of Behavior Therapy (New York, 1969). For a good survey of contemporary clinical theory and practice, consult Lawrence A. Pervin, Personality: Theory Assessment and Research (New York, 1970).

²⁵David Hackett Fisher calls this the Baconian Fallacy, whose classic examples derive from the nineteenth century. Yet it is Fischer's contention that most contemporary historians still implicitly accept the inverted Kiplingism, "Them that asks no questions isn't told a truth."

virtue of good psychohistory is that the historian's assumptions are relatively clear, like a deck of cards laying face-up on a table. There is no pretense at "bare description"; the psychohistorian seeks to interpret, and if the reader believes that his understanding of a historical figure or event has been enhanced, then the enterprise has been successful.

Psychohistory is, therefore, a form of presentism, or the study of the past for the sake of the present.²⁶ The application of information-processing concepts and terminology to the psychological theory of Edwards, while presentistic to be sure, is presentistic in part for historicist reasons.

In contemporary historiography, there is a tendency not to reject this statement in an abstract way but rather to accept it in principle and to forget it in practice. There is an inherited antipathy to questions and hypotheses and models which is apt to run below the surface of a historian's thought. The results are readily apparent in the conceptual poverty of many historical monographs--a poverty to be explained not by the stupidity of the authors, but rather by their habitual reluctance to give sufficient attention to the organization of their inquiry, to the specification of their assumptions, and to the explication of their intentions.

Historian's Fallacies: Toward a Logic of Historical Inquiry (New York, 1970), p. 7.

²⁶ Actually Stocking's use of "presentism" referred to a progressionist interpretation of historical events. Yet another form of "the study of the past for the sake of the present" is the imposition of contemporary models and categories on history; see Stocking, "Historicism and Presentism," and pp. 69-73 above. Polanyi refers to the misuse of the presentistic application of models to history as "the rationalist fallacy" in which "history may be written by applying our own standards, without allowing for the difference in the historical setting . . .," Study of Man, p. 87.

While it might be argued that Luther or Ghandi did what they wanted to do, there is clear evidence that Edwards could not say what he wanted to say because he lacked a suitable vocabulary.²⁷ Edwards' psychological thought cannot even be described adequately without the imposition of some additional concepts that he did not use.²⁸

Theorists may be divided into neologizers and non-neologizers, into those who invent new words to fit their vision and those who try to stretch or alter the meaning of current usage. Edwards clearly falls into the latter category. He stretched the meanings of key psychological terms like "faculty," heart," and "will" until they broke. This creates an odd situation for the historian of psychology who studies Edwards. Not only are many Edwardsean concepts foreign to contemporary psychology, they also were mostly inexpressible in the psychological jargon of Edwards' era. The information-processing analogue is, therefore, a tool which serves a dual purpose: it aids historicist description and presentistic explanation. To some extent, the reader must, in fact, "buy" the information-processing approach to

²⁷Perry Miller makes this point often; cf. Jonathan Edwards, pp. 187-188, and "Sense of the Heart." This situation represents an interesting inversion of the so-called "Whorfian Hypothesis"--that linguistic structure places severe limitations upon human understanding. Edwards apparently saw the world differently but could not adequately describe it. Very creative individuals must face this problem frequently.

²⁸See Chapter 2, pp. 60-67, for a discussion of the scholarly confusion which has resulted from trying to understand the psychology of Edwards solely on his own terms.

human cognition in order to react favorably to the interpretation of Edwards' thought in chapter five. Skeptics should keep in mind, however, that analogies are all that have ever existed for the explication of mental processes. The information-processing analogue is, by all estimates, the most heuristic, and (with certain limitations) believable analogy yet devised.²⁹ It is certainly an improvement on an analogy popular in Edwards' era, the "mind of God." Asa Burton, an Edwardsean of the late eighteenth and early nineteenth centuries, for instance, claimed that

the attributes of God are all comprised in three; benevolence, knowledge, and power, answering to the faculties in men called the heart, the understanding, and will
 . . .³⁰

It must have been reassuring to know that one's mind is a bit like God's. The analogy is somewhat deficient, however, since in order to evaluate the adequacy of the analogy one must first die. This would appear to place severe limitations on the capacity of the psychologist to convey the results of his evaluation to his colleagues.

²⁹The chief limitation, as Neisser points out, is the inability of computers to be sufficiently emotional and irrational (Cognitive Psychology, Chapter 11). A recent development in the application of information-processing theory and technology to irrational processes is the work of Christopher Evans, who holds that dreaming is analagous to taking a computer "off-line"; see the interview with Evans in Intellectual Digest, October, 1973, pp. 6-10.

³⁰Essays on Some of the First Principles of Metaphysics, Ethics, and Theology, ed. by James G. Blight (Albany, New York), 1973.

The second criticism of psychohistory (and by implication, the application of information-processing theory to Edwards) is in some respects more serious than the first. It is claimed that psychohistorians often substitute empty jargon and far-fetched analogies for good historical knowledge.³¹ There is no pat response to this allegation. Like any other historian, the presentist must do his homework; he must exhaust all primary and secondary information pertinent to his topic. He must be acutely aware of the complexity of historical information and not leap into unwarranted, simplistic, blockbuster flourishes.³² The use of an explicit model, like revised psychoanalysis or information-processing theory, unfortunately provides the temptation to try to map the model onto history in a perfectly-congruent fashion. The presentist historian must carefully delineate where the model fits and where it does not. Jonathan Edwards was hardly a computer programmer. He had never even heard of anybody called a "psychologist." There are, therefore, differences between the contemporary model and the object of historical inquiry.³³ It has been pointed out that, for Edwards,

³¹Cf. Barzun, "History."

³²Probably the classic piece of sophomoric, second-hand psychoanalysis is the study of Woodrow Wilson by William C. Bullitt and Sigmund Freud, Thomas Woodrow Wilson, Twenty-Eighth President of the United States: A Psychological Study (Boston, 1967).

³³There is never perfect congruence between models and whatever it is that is being modeled. As Michael J. Aptar points out,
If models are essentially explanatory in function . . .

information if of supernatural rather than natural origin, and that the operational phase of the TOTE unit consists not in active manipulation of the environment but in passive reception of the Holy Spirit.³⁴ In chapter four these differences between the theological psychology of Edwards and contemporary information-processing theory are not explained away or glossed over but, instead, are incorporated into a revised model that is appropriate for Edwards. From a psychological viewpoint, however, these differences are minimal when compared to the remarkable continuities. Man, that proactive-reactive, rational-emotive unity that Edwards observed floundering after God in his Northampton parish so long ago, is the same unified being that information-processing theorists envision when they reflect on the human implications of the structure and function of their computing machines.

The Cybernetic Hypothesis: A Modern Conception
of Man as Proactive and Reactive

According to Miller, Galanter, and Pribram, there are psychological optimists and psychological pessimists.³⁵ The

then the criteria used to judge them must be those used to judge theories in general. One will never be able to prove that a model is "true," just as one can never finally prove that a theory is true. The most that one can say of both a theory and a model is that it is consistent with the known facts, not that it is true.

Computer Simulation, p. 25.

³⁴See Chapter 3, pp. 108-112.

³⁵Plans, pp. 6-8

optimists are the behaviorists, the stimulus-response men, who, following Pavlov, seek to discover sets of environmental events which will consistently elicit given sets of overt behavior. In the twentieth century, these theorists have expressed great confidence that they can, theoretically at least, predict and control all human behavior.³⁶ Their confidence is based on the remarkable belief that the hyphen (the human mind) between stimulus and response is a passive sieve through which an environment and an organism interact with each other. The pessimists, on the other hand, maintain that although environmental events do affect behavior, the effect is mediated by an organism's image, or "picture of itself and its universe," that is, by the manner in which the person construes objects and events.³⁷ The pessimists, or cognitive psychologists, believe that the conscious and unconscious hyphen of the behaviorists is actually the most important determinant of human behavior. In a science which is dedicated to parsimony and prediction of behavior, the pessimists clearly violate the rules. They hold that man's nature

³⁶The most famous statement of the Behaviorist utopian braggadoccio is John B. Watson's:

Give me a dozen healthy infants, well formed and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select--doctor, lawyer, artist, merchant-chief, and yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations; and race of his ancestors.

Behaviorism (New York, 1925), p. 82. More subtle and slightly qualified, but similar expressions may be found in B. F. Skinner's works, especially Walden II (New York, 1948) and Beyond Freedom and Dignity (New York, 1971).

³⁷Miller, et al., Plans, pp. 1-2. The concept of

is not contained in a simple S-R equation but rather he is incredibly complex, and therefore that prediction of human activity will never be more than potential.

If it is granted that minds make a difference, one must inquire into how, exactly, a person's behavior is controlled by his "image". This, of course, is an aspect of the ancient mind-body dilemma, and more specifically, the problem of the will. The most famous and influential modern treatment of "the psychology of volition" is James's theory of ideo-motor action. Actually, the ideo-motor concept is a theory of mental life: each defaults by postulating a void. "Movement," said James, "is the natural, immediate effect of feeling . . . It is so in reflex action, it is so in emotional expression, it is so in the voluntary life."³⁸ According to James, then, behavior is automatically controlled by a person's internal representation of his universe, and that is that. To support this rather abrupt contention he offers a persuasive and picturesque example which, he claims, "seems . . . to contain in miniature form the data for an entire psychology of volition."³⁹

We know what it is to get out of bed on a freezing morning in a room without a fire, and how the very vital principle within us protests against the ordeal. Probably most persons have lain on certain mornings for an

³⁸William James, Principles of Psychology, 2 Vols., (New York, 1890), V. II, p. 527.

³⁹Ibid., p. 525.

hour at a time unable to brace themselves to the resolve. We think how late we shall be, how the duties of the day will suffer; we say, "I must get up, this is ignominious etc., but still the warm couch feels too delicious, the cold outside too cruel, and resolution faints away and postpones itself again and again just as it seemed on the verge of bursting the resistance and passing over into the decisive act. Now how do we ever get up under such circumstances? If I may generalize from my own experience, we more often than not get up without any struggle at all. We suddenly find that we have got up. A fortunate lapse of consciousness occurs; we forget both the warmth and the cold; we fall into some reverie connected with the day's life, in the course of which the idea flashed across us, "Hollo! I must lie here no longer"--an idea which at that lucky instant awakens no contradictory or paralyzing suggestions, and consequently produces immediately its appropriate motor effects.⁴⁰

Despite the charm and apparent common sense contained in James's notion of willing, his explanation strikes many contemporary psychologists as inadequate.⁴¹ Our understanding of the relationship between mental activity and behavior is hardly enhanced because we are told that volition becomes activity at "lucky instants." As Miller, et al., put it, "The bridge James gives us between the idea and the motor is nothing but a hyphen."⁴² Why did James, lying in bed, not

⁴⁰ Ibid., p. 524.

⁴¹ Cf. Gregory A. Kimble and Lawrence C. Perlmutter, "The Problem of Volition," Psychological Review, 1970, 77, 361-384, and Rollo May, "William James' Humanism and the Problem of Will," in Robert B. MacLeod, ed., William James: Unfinished Business (Washington, D.C., 1969), pp. 73-91. These recent articles examine James' theory of volition from very different perspectives--Kimble and Perlmutter are experimental psychologists while May is an existential psychotherapist. In each case, however, James' theory of volition, of will, is held to be basically sound but in need of elaboration.

⁴² Plans, p. 12. James' ambiguity was not unique in the nineteenth century; nearly all theorists of volition provided a hyphen "explanation." Cf. William B. Carpenter,

get up? Why did he eventually arise? Why, after arising, did he stay up and proceed with his daily activities? A model is needed which can transform the series of "lucky instants" into events which appear to occur in some logical sequence.

The cybernetic hypothesis, and in particular the TOTE theory of Miller, et al., provides a coherent, computer-based model which attempts to characterize the relationship between the inner man and the outer world. It can help to explain how man is both proactive and reactive: how James could lie in bed, passively receiving information from inner and outer sources and then suddenly get up and stay up; or how a backsliding Northampton parishioner of Jonathan Edwards could sit in a pew, earnestly seeking his salvation in yet another hellfire sermon, and suddenly become completely overwhelmed by a spiritual experience which later investigation would "prove" to be genuine.

The TOTE unit, Test-Operate-Test-Exit, is based on a number of key concepts, most of which are derived from computer technology.

Plan--

A plan is any hierarchical process in the organism that can control the order in which a sequence of operations is to be performed.

A plan is, for an organism, essentially the same as a program for a computer, especially if the program has the sort of hierarchical character described above.⁴³

Principles of Mental Physiology (London, 1874) and Alexander Bain, The Senses and the Intellect (London, 1855).

⁴³Miller, et al., Plans, p. 16.

Strategy and Tactics--

The molar units in the organization of behavior will be said to comprise the behavioral strategy, and the molecular units, the tactics.⁴⁴

Execution--

We shall say that a creature is executing a particular plan when in fact that plan is controlling the sequence of operations he is carrying out. . . . The execution of a Plan need not result in overt action--especially in man, it seems to be true that there are Plans for collecting or transforming information, as well as Plans for guiding actions.⁴⁵

Image--

The image is all the accumulated, organized knowledge that the organism has about itself and its world. . . . It includes everything the organism has learned--his values as well as his fact--organized by whatever concepts, images, or relations he has been able to master.⁴⁶

These concepts are all airy attributes of the human mind. No one has ever seen a Plan, a strategem or tactic, an Executive, or an Image, just as no one has ever seen a "faculty" or an electron. Each notion is invoked, following the "law" of parsimony, only when it is deemed necessary to help explain some observed behavior. It is apparent that until very recently few twentieth-century psychologists believed

⁴⁴Ibid., p. 17.

⁴⁵Ibid., p. 17. Informational Plans constitute Edwards' domain when he attempts to explain the interaction between the divine and supernatural light and the psychological mechanisms in man. We shall see that he proposes a plan for collecting (that is, for absorbing or receiving) the Spirit and a Plan for transforming the Spiritual light into an entirely new image.

⁴⁶Ibid., p. 17-18.

that the explanatory value of mental constructs was worth the speculative confusion they seemed to produce. Thus, as Miller et al. lament, "the elementary unit that modern, experimental psychologists generally select for their analysis of behavior is the reflex."⁴⁷ Man is stimulated and he responds; no analysis of the mind is necessary to account for behavior.

The S-R reflex unit would be ideal if men restricted their behavior to running through mazes and eating food when they are starved. Most important human activities, however, are far more complex activities which require reasoning, evaluation of alternatives, decision-making, and in general, the processing of a lot of information. Man reacts to stimulation, all right, but his reaction occurs only after he has manipulated and transformed the relevant information contained in that stimulation into a response that is appropriate to the achievement of a goal.

⁴⁷Ibid., p. 21. This is, of course, the behavioristic stimulus-response theory. Miller et al. needn't have been so historically provincial; Perry Miller has pointed out that Elizabethan (and seventeenth-century American Puritan) psychology was also based upon "the reflex"; see Seventeenth Century, Chapter 9. Although America's first intellectuals were more than willing to speculate about the structure and function of mental "faculties," they believed that mental activity occurred responsively and inevitably to stimulation. Decisions were not made, they just happened. In a sense, then, Locke wasn't saying anything new to a Puritan theological psychologist like Edwards. The passive, tabula rasa notion was implicit in Puritan theory. Remarkably, Edwards went beyond Locke, beyond his Puritan forbears, in formulating his own version of a synthetic psychology that included a crude version of what is now called the cybernetic hypothesis.

The general pattern of reflex action, therefore, is to test the input energies against some criteria established in the organism, to respond if the result of the test is to show an incongruity, and to continue to respond until the incongruity vanishes, at which time the reflex is terminated. Thus there is "feedback" from the result of the action to the testing phase, and we are confronted by a recursive loop.⁴⁸

The feedback loop, "the fundamental building block of the nervous system," was presented in Figure 4.⁴⁹ It is presented in a slightly different form in Figure 5. The TOTE loop is certainly less parsimonious than the simple S-R unit; Occam's razor has been put aside. That is as it should be for this most useful of all scientific dictums has been transformed by some behaviorists into a psychological guillotine.⁵⁰ Psychologists can thank their computers for reminding them that men still have minds.

What flows "over the arrows" from one box to another in Figure 5? Most cognitive psychologists would agree that (a) information and (b) control link the various phases of the TOTE loop.⁵¹ An individual receives information from many sources which he organizes into a Plan. He will then

⁴⁸ Miller, et al., Plans, p. 26.

⁴⁹ Ibid., pp. 26-27.

⁵⁰ Behaviorists have vied with one another for the figurative title of most behavioristic. When E. C. Tolman suggested that his rats constructed hypotheses, Edwin R. Guthrie, like Tolman a "behaviorist," derided Tolman for leaving his rats lost in thought; see E. R. Guthrie, The Psychology of Learning, rev. ed. (New York, 1952).

⁵¹ See Plans, pp. 26-27. An important publication outlet for cognitive psychologists is called simply Information and Control.

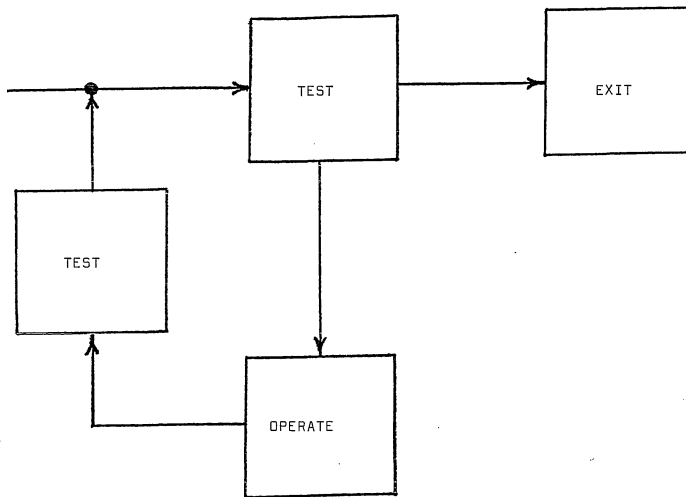


Figure 5. The TOTE unit.

exert control in whatever direction seems most appropriate for achieving the goal outlined in his Plan. Additional information, or feedback, is received after those initial operations are completed. After the feedback has been evaluated, a decision is then made to either re-execute or terminate. It is important to note that, although conscious decision making is crucial in this model, the decisions or choices are themselves determined by a fundamental principle which might be called "cognitive hedonism." An individual must choose that response which seems most likely to help him execute his plan successfully.

The TOTE unit is an attempt to represent the relationship between the Image and action, mind and body. Miller, et al. have thereby elaborated the hyphenated will bequeathed to twentieth-century psychology by James. The TOTE unit also may be said to represent the relationship between a person and his environment. Information received from the environment is actively processed, stored, and generally manipulated. Perception is not a strictly passive process, rather it usually occurs in the service of some purposeful, goal-oriented Plan. In fact, the TOTE unit permits no rigid distinction between perception and action. We are asked, in effect, to consider a stimulus and response not in narrow isolation, but broadly, as aspects of a feedback loop.

The simplest TOTE unit may be illustrated by the example of hammering a nail. Let us assume than an individual feels a compelling need to hammer a nail (see Figure 6).⁵²

⁵²See Plans, pp. 33-39.

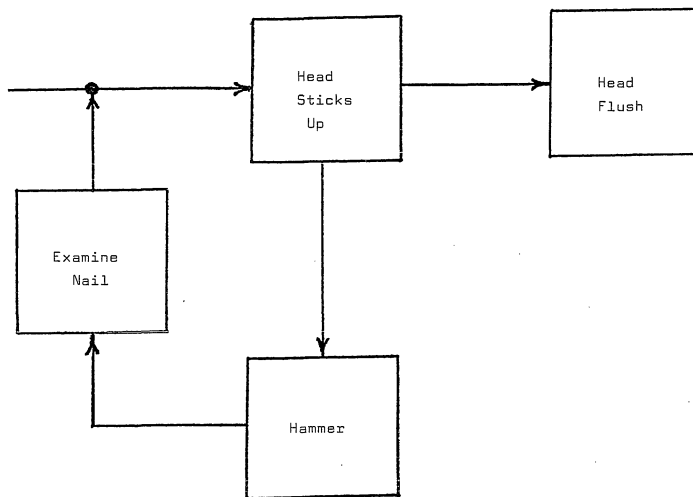


Figure 6. Hammering as a TOTE unit (Adapted from Miller, et al., Plans), p. 34.

First he would test the nail and note that the head sticks up. Next he would operate on the nail, hammering it down. He would then examine the visual feedback and, if he noted that the head still stuck up a bit, he would re-enter the loop and stay there until his task was completed. After the head of the nail is flush with the board, he would exit.

Many human activities, however, are neither as mechanical nor as simple as hammering a nail. In the case of William James, for instance, lying in bed on a cold morning, the process of creating a sufficient need to arise seems to involve a complex inner struggle, illustrated in Figure 7. James' morning Image is a function of two sorts of information, comfort and guilt. When he first awakens, his Image is in a state of quilibrium, he feels quite comfortable and not even a little bit guilty. It is, after all, very cold in the world outside his quilts and surely no one can fault him for not working while he is sleeping. As the morning evaporates, however, he feels less comfortable and more guilty. It is getting colder and colder in the room, his back is aching slightly from sleeping on a soft mattress, and even philosophers need to use the bathroom in the morning. In addition, he visualizes with increasing vividness faces red with anger over unkept appointments. For all these reasons (represented in subroutines "comfort" and "guilt" in Figure 7) and probably many others, James' picture of himself within his morning universe becomes decidedly unsatisfactory; he needs to get up. Time not only heals all wounds, it creates

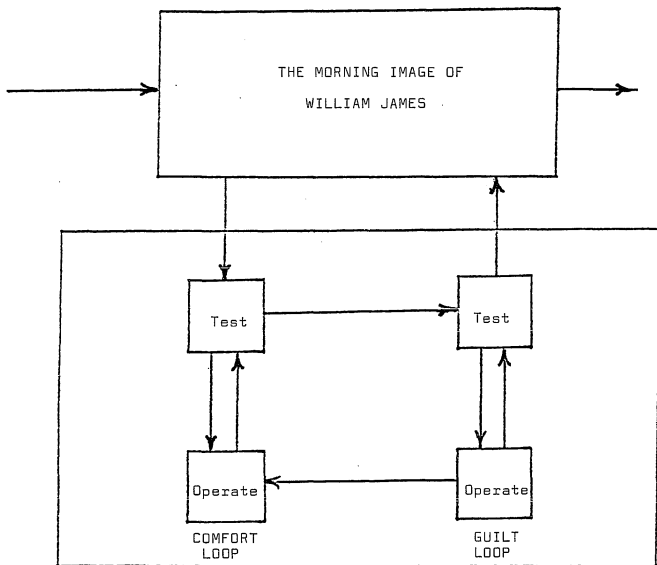


Figure 7. A TOTE representation of the mental operations required to create the need for William James to arise in the morning.

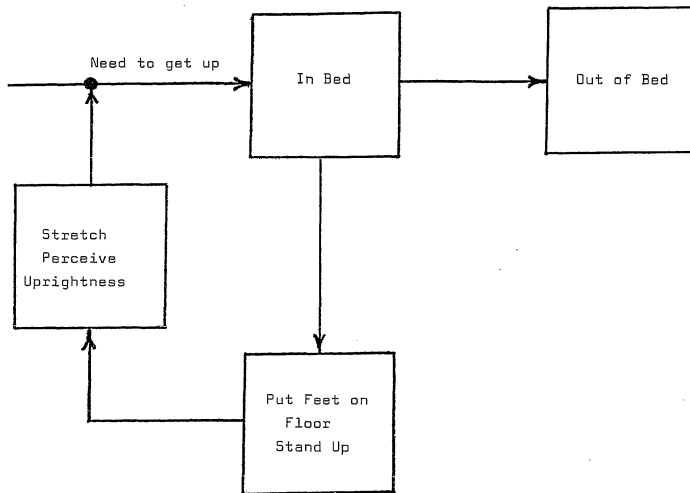


Figure 8. A TOTE representation of the physical operation of getting out of bed.

a few, and when James' Image is sufficiently punctured by the passage of time, he will organize a Plan to get up (Figure 8). Since he is very experienced at getting up, one jaunt through the loop will probably be sufficient.

All this talk about loops, TOTE units, routines, and information processing might lead one to ask what, precisely, is proved by characterizing a carpenter or William James the lie-a-bed as computer-like devices. Aren't we, in effect, stripping them of their humanity by describing their behavior in terms of the computer analog? Miller et al. believe that just the opposite is true:

It is so obvious that knowing is for the sake of doing and that doing is rooted in valuing--but how? How in the name of all that is psychological should we put the mind, the heart, and the body together? Does a Plan supply the pattern for that essential connection of knowledge, evaluation, and action? Certainly any psychology that provides less--that allows a reflex to behave at random, or leaves it lost in thought or overwhelmed by blind passion--can never be completely satisfactory.⁵³

They are convinced that man has a mind, a heart, and a body. He is a wonderfully complex, paradoxical machine. His "knowing" is initially reactive, he receives information from an infinite number of sources. This information is then processed, evaluated, and organized into a proactive plan of action. From one point of view, then, the TOTE unit is not a demeaning device at all. Rather it represents a flatfooted acceptance of the complex nature of man's reaction to and

⁵³ Ibid., p. 71. Miller et al. seem to have derived their immediate inspiration for this notion from Clarence Irving Lewis, An Analysis of Knowledge and Valuation (La Salle, Ill., 1946).

impress upon his environment. Moreover, the TOTE unit goes far beyond other synthetic concepts, offered by thinkers from Augustine to Dewey, in providing an empirically-based, coherent model which suggests how such a complex man might function.

Multiple Processing: Transsumative Man
in Computer Dress

The TOTE unite provides a model of the relationship between man's thinking and his actions. A complex and important proactive-reactive device, the mind, is seen to inhabit the behaviorists' void between stimulus and response. The TOTE unit does not, however, tell us very much about the thinking processes which seem to organize and direct much of human behavior. Miller et al. have filled in the gap of the will rather nicely; thinking and acting progress along a cybernetic loop. Yet thinking includes aspects of what Miller et al. call the "mind" and the "heart"; values, emotion, and motivation are inextricably intertwined with reason and judgment. Man is, in other words, a transsumative, rational-emotive unity. Edwards, of course, made a similar assertion and, in fact, Miller et al.'s discussion of mind and heart hardly clarifies matters any more efficiently than Edwards' "sense of the heart." In short, a model of transsumative thinking is needed to supplement the TOTE conception of proactive-reactive man.

The multiple-processing model which will be employed is, like the TOTE unit, derived chiefly from computer-simulation technology. Its real origins, however, lay not in cold steel and magnetic tape but on the warm leather couch of Sigmund Freud. As just about everyone knows, Freud's analysis of his neurotic, Victorian, Viennese patients led him to postulate the existence of sexual and aggressively-oriented unconscious processes, in addition to the conscious stream of thought. The psychoanalytic tradition which Freud founded has since maintained that mental functioning can be dichotomized into two modes, primary-process thinking and secondary-process thinking.⁵⁴ Primary-process thinking is said to be impulse governed, heavily laden with uncomfortable emotional loadings, and in general repressed in the normally-functioning adult. In this mode of thinking, logic and reality constraints have no place. Secondary-process thinking, on the other hand, is held to be conscious, goal-directed, and in conformity with ordinary rules of logic. These two modes are by no means independent of one another. In fact, "classical" Freudian theory maintains that the primary process is the source of all psychic energy, thus virtually all we say, think, or do is a disguised (by the so-called ego mechanisms) expression of the irrational desires of the primary process.

⁵⁴Freud's first and clearest expression of this view is in Dreams. For more recent views concerning psychoanalytic approaches to cognition consult David Rapaport, ed., Organization and Pathology of Thought (New York, 1951) and George S. Klein, Perception, Motives and Personality (New York, 1970).

Freud's model, the id, ego, superego relationship, isn't a very good one by information-processing standards. His constructs are so insubstantial that his "disciples" continue to emphasize one over the others, delete, or add still others. Freud's theory is also far too heavily committed to the notion that sex and aggression dominate the primary process. Ulric Neisser has attempted to maintain the basic Freudian insight into transsumative multiple-mode thinking within the framework of a more concrete, computer-based model. Neisser's thesis, like Freud's, is that "human thinking is a multiple activity."⁵⁵ Applying computer programming terminology to human cognition, Neisser contends that cognition may be divided into two modes, sequential processing and parallel processing.

The common core of all these theoretical dichotomies seems to be the distinction between a relatively well-ordered, easily describable, and efficiently adapted thought process on one side, and a simultaneous and superficially confused profusion of activity on the other. Apparently there are two different modes of handling the external and internalized information with which the mind must deal. It cannot be a coincidence that two corresponding modes have appeared as alternate possibilities in the design of "artificially intelligent" systems--that is, in programming computers to perform quasi-intellectual tasks. In that field, the two possibilities are often called "sequential" and "parallel."⁵⁶

Argumentation over the merits and demerits of sequential and parallel processing systems has occurred most frequently in the area of computer simulation known as "pattern

⁵⁵"Multiplicity of Thought," p. 8.

⁵⁶Ibid., p. 5. See also Oliver Sefridge and Ulric Neisser, "Pattern Recognition."

recognition."⁵⁷ We take for granted that literate human beings can distinguish an "A" from a "B" no matter whether the letters are typed, handwritten, or chicken-scratched. It is normally such an easy and automatic task that we seldom pause to consider by what means we distinguish one pattern from another. Information-processing theorists, however, have seized upon pattern recognition and transformed the process into a virtual prototype of human information processing. Computers can be programmed to recognize or identify patterns that humans can also identify, and a composite model of human pattern recognition has emerged which is based upon the computer models (Figure 9). A pattern or message is received first at the sense organs, for instance the retinas of the eyes. It then traverses neural pathways and is subject to feature analysis, which is a parallel process called "pandemonium," illustrated in Figure 10.⁵⁸

Selfridge has called the components of feature analysis "demons"--a term which aptly characterizes their chaotic id-like activity. The image demons merely record the image of the pattern. Each feature demon searches for a particular

⁵⁷For an extensive sampling of the important pattern recognition research consult Leonard Uhr, ed., Pattern Recognition: Theory, Experiment, Computer Simulations, and Dynamic Models of Form Perception and Discovery (New York, 1966).

⁵⁸Oliver Selfridge, "Pandemonium: A Paradigm for Learning." In The Mechanisation of Thought Processes (London, 1959). There are other feature analysis schemes, notably template matching, but see Neisser (Cognitive Psychology, Chapter 3) for a critique of this and other alternative theories.

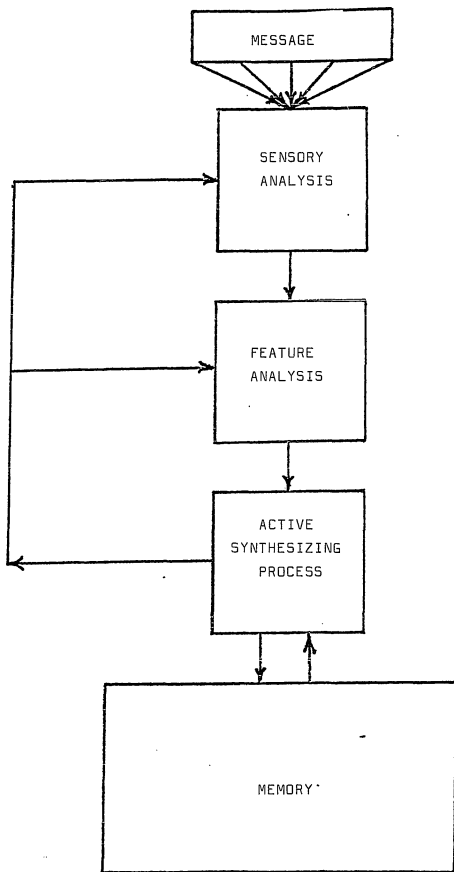


Figure 9. A model of human pattern recognition.

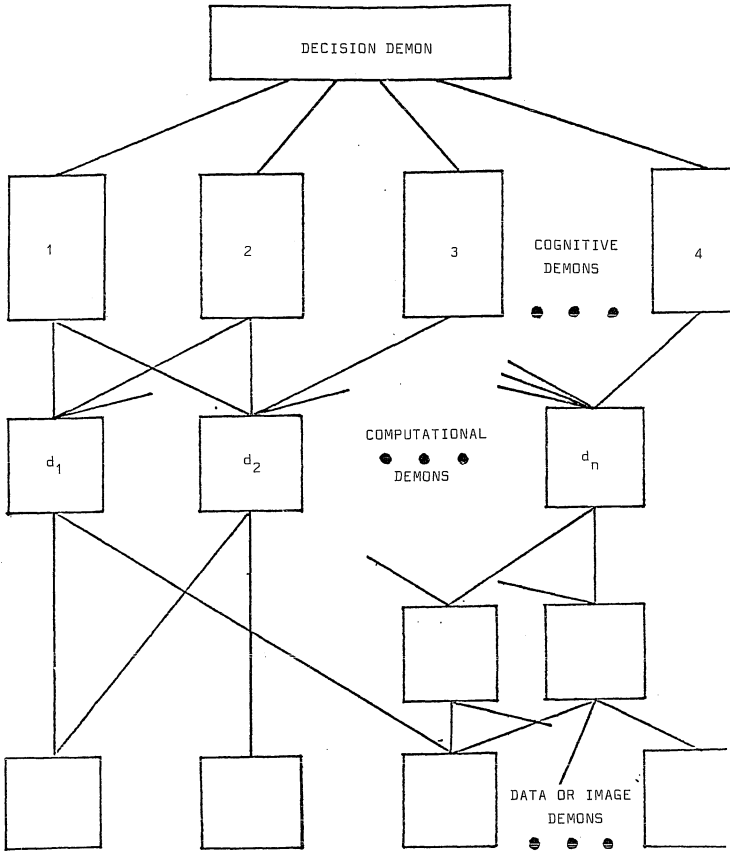


Figure 10. Parallel processing (adapted from Neisser, *Cognitive Psychology*, p. 75.)

characteristic of the pattern: certain angles, curvatures, or lines. Each cognitive demon is capable of recognizing one pattern, for example a letter in the alphabet. Each cognitive demon looks for features which characterize its particular pattern. When it finds one it yells out and the more it finds the louder it yells. The decision demon, listening to the pandemonium, selects the cognitive demon who is yelling the loudest as the pattern most likely occurring in the environment.⁵⁹ It is a parallel program because there is no logical sequence of steps to complete before the pattern is recognized. All the information pertinent to the pattern bombards the decision-making apparatus "in parallel" or simultaneously. No analyzer depends on the course or the outcome of processing by the others.

The parallel pandemonium feature analysis cannot, however, explain the remarkable diversity and speed of human perception. If human pattern recognition culminated in pandemonium it is likely that we should all drown in a din of neural demons, we should never recognize patterns and we should certainly never understand the meaning of them. Much of the information associated with a signal is provided by what it ought to be rather than anything contained in the signal itself, that is, by the context of the event.

The power of context is clear. Rules can be used to reduce the number of possible alternatives that are to be

⁵⁹Excellent discussions of the Pandemonium model may be found in Lindsay and Norman, Human Information Processing, pp. 115-131 and Neisser, Cognitive Psychology, pp. 71-76.

considered at any moment. This does not imply, of course, that perception requires a conscious trial-and-error approach to determine the alternative that best fits the contextual information . . . It supplies the rules underlying the construction of our perceptual world, tells us what to expect, and gives plausible interpretations of what we are perceiving.⁶⁰

It is much easier, for instance, to learn strings of words which follow the familiar rules of English grammar than it is to learn random arrays of words.⁶¹

Our expectations of what will come next (e.g., a noun, verb, etc.) change continuously as the information is interpreted. This process of moving sequentially through or across a pattern while revising expectations is referred to as "analysis-by-synthesis"; it is an active, constructive, sequential process that proceeds according to rules which may or may not be consciously elaborated.⁶² Memory provides not only the rules used in deriving the expectations, but also knowledge of the recent sensory events. The sequential, analysis-by-synthesis process in pattern recognition is represented by a simple decision tree in Figure 11.

The combined parallel pandemonium and sequential analysis-by-synthesis model of pattern recognition is very appealing, once one overcomes his modernist aversion to what might appear to be a return to demonology. Computers can be

⁶⁰Lindsay and Norman, Human Information Processing, pp. 134-135.

⁶¹George A. Miller, "Decision Units in the Perception of Speech," IRE Transactions on Information Theory, 1962, 8, 81-83.

⁶²On analysis-by-synthesis in pattern recognition, consult Neisser, Cognitive Psychology, pp. 193-198, and

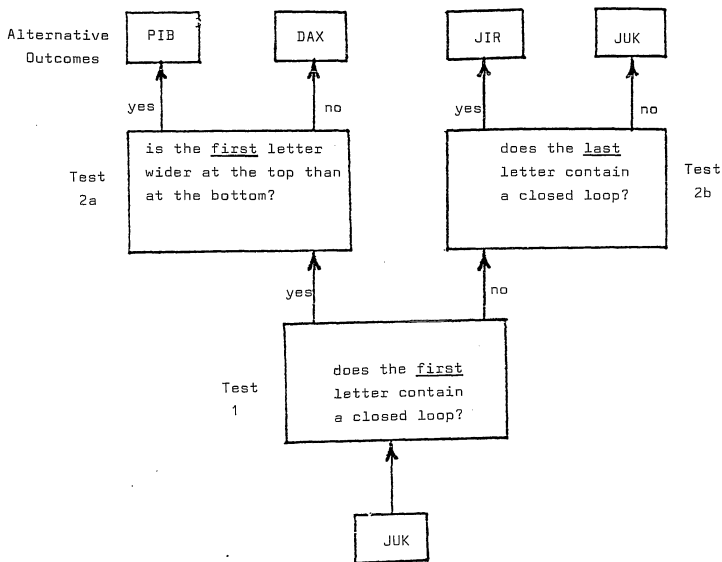


Figure 11. An example of sequential processing in pattern recognition (adapted from Neisser, Cognitive, p. 73.)

programmed to recognize patterns according to this model and human pattern recognition seems to progress in a similar manner. It does not, however, adequately account for a person's continued construction of a perceptual, conceptual and memorial world into which perceived objects, thoughts, and images are placed.

When we first perceive or imagine something, the process of construction is not limited to the object itself. We generally build (or rebuild) a spatial, temporal, and conceptual framework as well . . . little has been said about this background; "construction" has meant construction in focal attention. But when you see a friend across the street, you are not seeing only him. He, a person of a particular kind with a particular relevance to your life, is appearing there, a particular place in space, and then, at a certain point in time. Similarly, a spoken sentence is not just a string of words to be identified, but it has a particular meaning, is spoken⁶³ by a particular person, at a particular time and place.

Human mental activity, then, is characterized by a parallel, mostly unconscious phase, a sequential stream of mostly conscious thought, and "background processing" of the rubrics and categories which permit us to derive intimate personal meaning from our percepts and images. Man is a multiple-processing organism.

The categories, often called schemas or schemata, in the background provide the labels for the constructive, synthetic activity that constitutes human perception and thinking.⁶⁴ When the background is intact, as it is during normal

Lindsay and Norman, Human Information Processing, pp. 131-148.

⁶³Neisser, Cognitive Psychology, p. 286.

⁶⁴Neisser's use of the term "schemata" derives from F. C. Bartlett, Remembering and Thinking (New York, 1958). The

waking consciousness, events are said to be analyzed first by the pre-attentive processes. During this brief operation stimuli are sorted out in a gross fashion. In line with whatever set and strategy he employs, the individual then proceeds to construct a more-or-less accurate copy of the external or internalized stimuli with his focal-attentive mechanisms. Much of the potential information, that which is not singled out for synthesis in focal attention, fades rapidly because it is not verbally encoded and hence is unavailable to long-term memory. During the pre-attentive phase, information is said to be processed "in parallel," and this chaotic activity is in many ways analogous to Freudian primary-process thought or the syncretistic thinking of early childhood.⁶⁵ The focal attentive phase, on the other hand, is characterized by "sequential" processing which tends to follow the conventions of logic and is similar to the Freudian notion of secondary process. While the content of sequentially-processed information is contained in the conscious stream of thought, the information processed in a parallel manner forms a semi-conscious to unconscious penumbra of vagueness around the conscious object or thought. Because of its immunity

most famous exponent of the importance of schemata is, however, Jean Piaget; cf. The Construction of Reality in the Child (New York, 1954). (1936)

⁶⁵See Ernest G. Schachtel, Metamorphosis (New York, 1959) for a brilliant analysis of the unfettered thinking of childhood and its transformation into the predominantly uni-dimensional, goal-directed thinking of adulthood.

from logical constraints and because of its short duration in the mind, the information processed only by the parallel, pre-attentive mechanisms is often experienced as wispy images or fleeting "feelings." Importantly, in man these sequential and parallel modes function as a complex, integrated, mostly unpredictable unit.

. . . human thinking is a multiple activity. Awake or asleep, a number of more or less independent trains of thought usually coexist. Ordinarily, there is a "main sequence" in progress, dealing with some particular material in step-by-step fashion. The main sequence corresponds to the ordinary course of consciousness. It may or may not be influenced by the other processes going on simultaneously. The concurrent operations are not conscious, because consciousness is intrinsically single.⁶⁶

The principle function of this unconscious activity is, according to Freud, to find discharge for emotions which are striving for expressing in our minds.⁶⁷ Thus, all conscious "rational" activity is potentially or actually influenced by unconscious "emotional" activity.

Under normal conditions a person encounters a wide variety of constantly changing but still relatively familiar stimulation. He uses various perceptual strategies to grossly classify a broad spectrum of stimulation and he then actively constructs his perception, or that which occupies the focus of his attention. That which escapes his attention rapidly fades. An important change occurs, however, when the ordinary background processing is disrupted. The environment may

⁶⁶Neisser, "Multiplicity of Thought," p. 8.

⁶⁷Cf. Dreams and New Introductory Lectures on Psychoanalysis (New York, 1933).

become unusually redundant, as in hypnosis; it may be impoverished, as in some forms of mediation or sensory deprivation; or an individual's will to categorize may be weak, as when he is falling asleep or under the influence of certain drugs.⁶⁸ Under each of these conditions the intensity of the drive to Test-Operate-Test-Exist is diminished. The individual is simply more inclined to accept the world, rather than to grapple with it, organize it, and eventually try to conquer it. He does not pay exclusive attention, as he normally does, to stimuli that are relevant to a plan because he has, as Miller et al. put in, "relinquished his plan."⁶⁹ Thus he may experience many classical symptoms of a "trance" state, such as visions, hallucinations, dreamlike imagery, or strange and exotic ideas which normally lie outside his narrow, plan-oriented focus of attention.⁷⁰

All this abstract talk of an information-processing model of the trance state may have led to the anticipation that a new technique is about to be presented which is

⁶⁸The best recent single source of empirical data and theoretical speculation concerning all sorts of altered states is Charles T. Tart, ed., Altered States of Consciousness (New York, 1969). The most coherent and colorful examination of certain of these states, especially mystic consciousness and religious conversion is still William James, The Varieties of Religious Experience (New York, 1961).

⁶⁹Plans, pp. 103-116.

⁷⁰The most important theoretical work on the concept of trance as a cognitive psychological phenomenon is that of Ronald E. Shor; see especially "Hypnosis and the Concept of the Generalized Reality Orientation," American Journal of Psychotherapy, 1959, 13, 582-602.

capable of hypnotizing a computer. Not quite. The trance state, whatever its origin, is simply a special case in which usually unconscious, emotionally-loaded "parallel" information is obviously involved in conscious, sequential human perception and thinking. The important point is that, as Neisser contends, "all directed thinking is an elaboration of this sort."⁷¹ That is, rational appearing, goal-directed, TOTE-type activity in humans draws much of its raw material and insights from this vast storehouse of peripheral information, and the evaluation of feedback is itself primarily a function of barely-conscious or unconscious irrational considerations. Freudian "ego psychologists" have called this process "regression in the service of the ego."⁷² Conscious and unconscious meld into the creative syntheses which characterize man's attempts to order and understand.

The Creative Unified Mind of Man

Nothing better illustrates the transsumative, rational-emotive unity of man's mental life, perhaps, than the reflections of creative people upon the creative process. Nearly all of them agree with Pasteur who contended that chance favors the prepared mind. Creative insight and discovery, that which yields basic understanding, obviously requires considerable learning and preparation. Yet nearly

⁷¹Cognitive Psychology, p. 303.

⁷²See Ernst Kris, Psychoanalytic Explorations in Art (New York, 1952).

every creative artist or scientist who has taken the time to reflect on the nature of creation has attached equal, or in some instances, greater importance to "chance," to relaxing and receiving, or waiting.⁷³ But waiting for what; and from where? They wait, of course, for insights whose origin was formerly thought to be God, but after Freud has generally been labeled, rather vaguely, the unconscious. The poet A. E. Housman's recollection of his own creative waiting game is a typical expression:

Having drunk a pint of beer at lucheon--beer is a sedative to the brain, and my afternoons are the least intellectual portion of my life--I would go out for a walk of two or three hours. As I went along, thinking of nothing particular, only looking at things around me and following the progress of the seasons, there would flow into my mind, with sudden and unaccountable emotion, sometimes a line or two of verse, sometimes a whole stanza at once, accompanied, not preceeded, by a vague notion of the poem which they were destined to form part of. Then there would usually be a lull of an hour or so, then perhaps the spring would bubble up again. I say bubble up because, so far as I could make out, the source of the suggestions thus proffered to the brain was an abyss . . . the pit of the stomach. When I got home I wrote them down, leaving gaps, and hoping that further inspiration might be forthcoming another day.⁷⁴

⁷³Virtually every individual whom society has proclaimed "creative" has expressed his own creative process in these terms; see Brewster Ghiselin, ed., The Creative Process (Berkeley, Calif., 1952) for a survey of the introspective analyses of a broad range of creative individuals: scientists, artists, poets, novelists, and mathematicians. For a general theory of creative thinking which accommodates the notion of a vacillating, active-passive creative process see Graham Walls, The Art of Thought (London, 1926) and Herbert Crovitz, Galton's Walk (New York, 1970).

⁷⁴A. E. Housman, The Name and Nature of Poetry (New York, 1933), pp. 48-49.

The only unusual aspect of Housman's account is his localization of the source of his creative insights in the pit of his stomach. In presenting this hypothesis to the world, Housman offered the raw material to his critics for some insights of their own. They might contend, for instance, that what Housman understood to be poetical insights were really unfortunate mental reactions to gas pains produced by his too rapid imbibing of beer. His poetry, in other words, is the equivalent of a belch.⁷⁵

Surprisingly, Housman and most other reflective, creative individuals would probably not object to a comparison of their insights with a belch, with its sometimes uncomfortably long waiting period and the emotional excitement and renewal that accompanies the triumphant expulsion.⁷⁶

⁷⁵Rollo May has criticized Housman's analysis of the creative process because of its emphasis on passivity. May believes that creativity is an active process and, in support of this view, he quotes William Butler Yeats whom, claims May, was a far greater poet than Housman; see "Creativity and Encounter," in H. M. Ruitenbeek, ed., The Creative Imagination (Chicago, 1965), pp. 283-291. May misses the point entirely. In groping for support for his existentialist views he ignores what he, as a reasonably-creative individual, must know from experience: Creativity is both proactive and reactive. Also, Yeats' greatness as a poet has been disputed by scholars who probably know far more than May about poetry; cf. Karl Shapiro, "W. B. Yeats: Trial by Culture." In In Defense of Ignorance (New York, 1960), pp. 87-113.

⁷⁶Housman himself compared it to "a morbid secretion" (Name and Nature, p. 48). One of the clearest examples of the emotional explosiveness of creating is Hart Crane's method of writing poetry. Crane, claims critic Malcom Cowley, would get roaring drunk on hard cider, lock himself in a room and finally

appear . . . his face brick-red, his eyes burning, his already iron-gray hair bristling straight up from his skull. He would be chewing a five cent cigar which he

Housman's analysis of the events leading up to, including, and following a creative explosion contains, in a nutshell, a compelling portrait of an integrated proactive-reactive, transsummative rational-emotive man. Writing a poem is but a special case of planned activity and man, as Miller et al. point out, is always executing some Plan (at least while he is awake). From a cybernetic viewpoint, the only difference between hammering a nail and writing a poem is that the former requires manipulation of a physical object while the latter emphasizes the mental manipulation of ideas. Housman's plan to write poetry is presented in an adaptation of the TOTE unit (see Figure 12).

Housman, like any other creative individual, did far more than drink and walk. He undoubtedly spent his mornings studying and writing, and when found himself stymied or unproductive he retired to his pub. There he began the business of reducing incongruity in his system; he "tested" proactivity by drinking and walking. The operation, however, is reactive: he waits as he walks. The rhythmic pounding of the waves and his own footsteps, combined with the alcoholic sedation produce a very relaxed man who has, in fact, temporarily relinquished his original plan. His background

had forgotten to light. In his hands would be two or three sheets of typewritten manuscript, with words crossed out and new lines scrawled in. "Read that," he would say. "Isn't that the grrrrreatest poem ever written!"

(Ghiselin, Creative Process, p. 146).

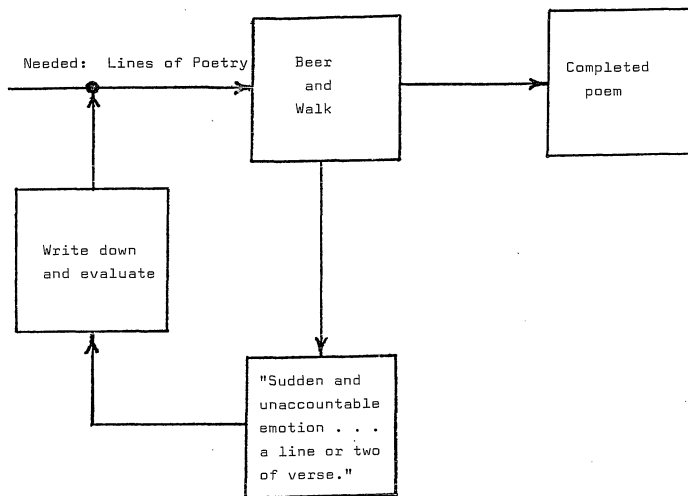


Figure 12. A TOTE representation of A. E. Housman's account of writing poetry.

process of (probably) poetic rubrics and categories has faded; he has assumed a mild trance-like state. The poetical problems which confronted him earlier in the day now slip to the back, but not out of his mind.⁷⁷ His attention broadens and much external and internalized parallel information is no longer ruled out of court because they do not serve the purposes of a Plan or goal.

Suppose, for instance, that the poet had pondered all morning over the last couple of lines of a poem. No matter how he altered the "line or two of verse" he was considering, they simply would not fit. While walking about after his luncheon beer, however, he would have the opportunity to survey many alternative lines as they bubbled up from "the pit of the stomach." Each of a large number of alternative poetical demons would be shouting with relatively equal intensity (as illustrated in the pandemonium model, Figure 10). On what basis, then, is a decision made to choose one verse over another. It cannot be a strictly rational, conscious choice, since the poet has temporarily discard his Plan. The decision, then, must be a function of unconscious or barely verbalizable, esthetic considerations. As Housman states, "a sudden and unaccountable emotion" accompanies the mysterious appearance of the verse. The lines seem suitable, or true, because they feel that way. Later on,

⁷⁷ See Shor, "Generalized Reality Orientation," for an analysis of how and why customary objects of attention fade to the background of awareness. See also Neisser, Cognitive Psychology, pp. 286-287.

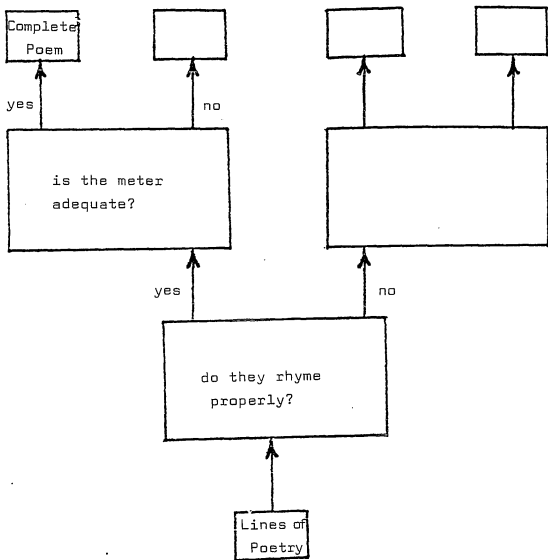


Figure 13. Some aspects of sequential processing in the construction of a poem.

the felt insight must be elaborated, altered, and actively constructed in the focus of attention. "Sometimes," laments Housman, "the poem had to be taken in hand and completed by the brain."⁷⁸ The logical, sequential integration of the lines into a poem is illustrated in Figure 13.

The continued interplay of parallel and sequential processes, of the emotions and reason, is certainly not unique to the arts. Scientists from Copernicus to J. D. Watson owe their initial insights to unconscious, emotional, esthetic sensibilities in their discoveries.⁷⁹ Virtually all purposeful human activity can be understood within the context of the proactive-reactive, transsumative information-processing model. Some relatively mechanical activities, like hammering a nail or getting out of bed, require mostly doing and little waiting for instructions from the unconscious. Other more difficult endeavors, like writing a poem or making a scientific discovery, or even changing a tire without a tire iron, require as much work but more patience. Intense preparation and active integration surround a lonely wait for the solution that feels right.

⁷⁸"Name and Nature," p. 49.

⁷⁹It is well known that Copernicus's insight into the heliocentric nature of the universe was founded primarily upon the symmetrical beauty of the new conception rather than upon its ability to predict the movement of heavenly bodies more efficiently (Kuhn, Copernican Revolution). James D. Watson was convinced of the accuracy of his double helical DNA molecular model because it was "too pretty not to be true"; see The Double Helix (New York, 1968).

CHAPTER V

PROCESSING DIVINE INFORMATION

Applying a model to history is a little like trying on a new pair of shoes. One must first put the shoes securely on and then walk around to determine whether there is discomfort caused by incongruities between the shape of the shoes and the shape of the feet which inhabit them. If the new shoes don't feel right, then they are rejected and a pair which fits better is sought. Likewise, a historical model must actually be applied, tried on for size, before the fit of the model to the historical data can be evaluated. But how much congruence between data and model constitutes a fit? In fact, there are no objective guidelines to follow. If the model does not seem to violate any basic assumptions present in the data, and if the model seems to place the data in a useful new perspective, then the entire venture must be judged worthwhile.¹ It is a major contention of this essay that the basic psychological assumptions of Jonathan Edwards, the data, are precisely those of a much more explicit contemporary theory, information processing. This

¹Robert F. Berkhofer, in his groundbreaking Behavioral Approach, offers an intriguing chapter on model building and historical inquiry (chapter 8). Although he gets rather bogged down in abstruse sociological theory, he apparently favors the application of models to history. Yet neither he, nor anyone else, has determined exactly how this should be done.

chapter is an attempt to demonstrate that information-processing theory is an intellectual "shoe" that Edwards can wear comfortably and with pride. Like any piece of fine apparel this psychological model accentuates rather than distorts the underlying beauty of the wearer.

We have seen that much of the recent commentary upon the thought of Edwards has emphasized that the picture of man which emerges from his writings is complex and seemingly contradictory. Sometimes explicitly and sometimes implicitly, the various commentators have characterized the Edwardsean model of man as both proactive and reactive; and as a transsumative, rational-emotive unity. We have also seen that, for a variety of reasons, Edwards' psychological system has remained very mysterious. How might such a complex man function? The psychological concepts and jargon of Edwards' era were incapable of accomodating the Edwardsean notions and scholars have been seemingly ignorant of any other psychological scheme which can maintain the spirit of Edwards' thought while at the same time elaborate it and give it generality.

In order to fill some gaps in Edwards' psychological theory, and to trace his psychological ancestry and posterity, he has been place into a context: the synthetic tradition in psychology which has culminated in contemporary information-processing theory. This approach to psychology, like that of Edwards, holds to proactive-reactive and transsumative principles, and it provides some computer-based models which

describe how such a complex man might carry on his day-to-day activities, or how he might think and behave.

Conversion, the phenomenon which most interested Edwards, is both a human activity and more than a human activity. It involves the interaction of a human mind with a supernatural spirit. According to Edwards, it is God Himself who, under the appropriate conditions, can be creatively discovered at the fringe of human consciousness. What emerges from this chapter is an information-processing explanation of conversion that might satisfy most contemporary cognitive theorists. Remarkably, the information-processing model provides only a new perspective through the structuring of the chapter, and some descriptive detail in a number of figures and analogies. All else, the synthetic principles, the theorizing, and the data, are derived from Edwards. He once acknowledged that "there is a vast variety, perhaps as manifold as the subjects of the operation [of conversion]." He quickly added, however, that "in many things there is a great analogy in all."² While the details of the "great analogy" were beyond his grasp, its main themes were not.

² A Faithful Narrative of the Surprising Work of God. In C. C. Goen, ed., The Great Awakening (New Haven, Conn., 1972), p. 160. In his "Editor's Introduction" to the Religious Affections, John E. Smith claims that Edwards emphasized the "vast variety," while Goen, in his "Editor's Introduction" to The Great Awakening and A. V. G. Allen, in Jonathan Edwards hold that Edwards emphasized the "great analogy." The latter point of view is probably closer to the truth. Edwards often paid lip service to individual differences as he casted about for an all-encompassing scheme that would describe everyone.

Incongruity: Creating a Need
for Conversion

The "great analogy" or morphology of conversion was presented most clearly and positively in Edwards' Faithful Narrative. This remarkable work, an elaboration of a letter to his fellow minister Benjamin Colman of Boston, reveals a side of Edwards that is seldom visible in his adult writings.³ It contains an array of first- and secondhand accounts, along with Edwards' theoretical commentary, of conversions during the early days of the Great Awakening in the Connecticut Valley. Edwards organizes his evidence, bit by bit, and emerges with a composite formula for conversion which is not so much a "how to do it" manual as a simple generalization. The colorful anecdotes and enthusiastic lack of defensiveness easily differentiates this work from his later, relatively cold, abstract, argumentative tracts like Original Sin and Freedom of the Will.⁴

In those early days of the Awakening, in 1735 and 1736, Edwards was convinced that the Holy Spirit had taken up temporary residence in the Connecticut Valley. Many "surprizing conversions" had been accomplished and he was eager to tell the world exactly how the wonderful work had occurred. In the Faithful Narrative he had only to describe what he had

³See Goen, "Editors Introduction," pp. 32-46, for a textual history of the Faithful Narrative.

⁴Goen says that Isaac Watts and John Guyse, who collaborated on a preface to the first edition of the Faithful Narrative, found it to be too colorful. They carefully

seen and organize that data as coherently as possible. He could thus discuss with feeling and in great detail the series of events which usually led up to the cataclysmic conversion. After he became an apologist rather than a simple participant-observer of the Great Awakening he altered his emphasis. He pointed out repeatedly that since the devil can imitate all the fears, behavioral changes, and despair of the immediate pre-conversion period, this period should be ignored because it contains no sure signs of grace. It is to the Faithful Narrative, then, that we must turn for Edwards' views on the first phase of the conversion sequence.

According to Edwards, God first makes His presence felt by creating a need for conversion. People who are satisfied with, or uninterested in the state of their soul, will not be motivated to seek God, and hence they will never find Him. Edwards believed that most of the inhabitants of his own town of Northampton, in the period immediately preceding the Awakening, were typical of the complacent, corrupt, degenerate type who has no room in his life for God.

Licentiousness for some years greatly prevailed among the youth of the town; they were many of them very much addicted to night-walking, and frequenting the tavern, and lewd practices, wherein some, by their example exceedingly corrupted others. It was their manner very frequently to get together in conventions of both sexes, for mirth and jollity, when they called frolics. . . .⁵

omitted some passages and apologized for other which might offend readers ("Editor's Introduction," p. 39).

⁵Faithful Narrative, p. 146.

The validity of Edwards' rather stern judgment of the worth of "frolicking," while easily debatable, is not at issue here. The point is that Edwards believed such complacent individuals could never be receptive to the Holy Spirit because they perceived no incongruity between their current state and some ideal or desired condition. Until they felt a sense of spiritual inadequacy, the "licentious" citizens of Northampton would continue to frolic rather than organize a plan to seek their salvation. Seen through Edwards' cold Calvinist eyes, his parishioners were spiritually asleep, and sleeping men and women are frightfully unaware of imminent dangers which surround them. Clearly, the spiritually slumbering townspeople would have to be awakened, made aware of their own inadequacy, before they would begin to plan for salvation rather than frolics.

During the period of what Edwards calls "first awakenings," smug self-assurance is transformed into nervous insecurity.⁶

Persons are first awakened with a sense of their miserable condition by nature, the danger they are in of perishing eternally, and that it is of great importance to them that they speedily escape, and get into a better state. Those that before were secure and senseless, are made sensible how much they were in the way to ruin in their former courses.⁷

This is the rudest awakening imaginable. One suddenly finds himself, or actually perceives himself, out of favor with God

⁶Ibid., p. 164.

⁷Ibid., p. 160.

and in imminent danger of burning forever in the devil's fiery pit. A wide gulf separates an "awakened" individual's sorry spiritual status quo and his goal of saving grace. Clearly, there is serious business to attend to.

By what means does God create the sense or need to seek conversion? What, for example, moved the degenerate Northampton youths to religion? Chiefly, according to Edwards, fear. In the Connecticut Valley, for instance, the violent death of a youth in Pascommuck in the spring of 1734 "much affected many young people."⁸ This was followed by the death of a young woman who, on her deathbed, counseled others on the means to grace. "This," claims Edwards, "seemed much to contribute to the solemnizing of the spirits of many young persons."⁹ There was also fear of a more abstract sort in the form of Arminianism, the traditional New England "Bogy-Man."¹⁰ Edwards, and many of his ministerial colleagues

⁸ Ibid., p. 147.

⁹ Ibid., p. 148.

¹⁰ "Arminianism," remarked Clyde Holbrook, ". . . is a complex of notions involving an elevated confidence in freedom of choice, a sharply upward revised estimate of human nature, and a form of common sense moralism . . ." ("Editor's Introduction" to Jonathan Edwards, Original Sin, New Haven, Conn., 1970, p. 4). There is a good deal of controversy concerning whether or not "Arminianism" was a real and powerful enemy of the congregational way or merely a straw man. Goen, ("Editor's Introduction," pp. 4-18) makes a strong case for the reality of the Arminian threat, while the straw-man hypothesis is advanced by Edmund S. Morgan in his The Gentle Puritan: A Life of Ezra Stiles, 1727-1795 (New Haven, Conn., 1961), pp. 15-19, and Gerald J. Goodwin, "The Myth of 'Arminian-Calvinism' in Eighteenth Century New England," New England Quarterly, 1968, 41, 213-237.

forecasted the decline of the New England Congregational way into chaotic heterodoxy if Arminian principles were not unilaterally renounced. If Congregationalism declined, it was claimed, the awful fate of all New Englanders would be sealed. The point was that all concerned had better act quickly if the devil and his Arminian army were to be defeated.

Although fear was an especially effective method of motivating complacent frolickers to act in behalf of their souls, Edwards also saw God creating spiritual incongruity in another manner. God sometimes saw fit to convert a few renowned sinners, thereby focusing attention on the practical benefits of coming to grace. If one person's life could be miraculously transformed from a miserable existence into a vital, useful, secure one, then many people would be moved to duplicate that transformation. They would be motivated by attraction to the godly life in addition to being repelled by the prospect of becoming an eternal cinder. In the Faithful Narrative Edwards describes just such a "surprising work of God" which, he claims, had a profound positive impact on the progress of the Great Awakening in the entire Connecticut Valley. It involved the apparent conversion of

a young woman, who had been one of the greatest company keepers in the whole town. When she came to me, I had never heard that she had become in any wise serious, but by the conversation I then had with her, it appeared to me that what she gave an account of was a glorious work of God's infinite power and sovereign grace; and that God had given her a new heart, truly broken and sanctified. I could not then doubt of it, and have seen much in my acquaintance with her since to confirm it.¹¹

¹¹ Faithful Narrative, p. 149.

According to Edwards, this remarkable event helped open the spiritual floodgates in Northampton and surrounding communities. It was "the greatest occasion of awakening to others, of anything that ever came to pass in the town."¹² She was convincing and her behavior had changed remarkably. Seeing this about face in the "company keeper," many others became convinced that God was among them. They quickly made plans to seek grace, to reduce the incongruity between their own sinful ways and the saintly life as exhibited by the reformed "company keeper."

Edwards supports these generalizations concerning God's Modus Operandi with two case studies drawn from his Northampton parish. One of these, Phebe Bartlet, illustrates God's use of the technique of fear to create the need for conversion. Phebe, a child of four, seemed to be growing up in quite an ordinary fashion until her "hopefully converted" eleven year old brother "seriously talked to her about the great things of religion."¹³ After these discussions with her brother she became withdrawn and began spending much time alone in her room praying. Then one day,

when the child had done prayer, she came out of the closet, and came and sat down by her mother, and cried out loud. Her mother very earnestly asked her several times what the matter was, before she would make any answer; but she continued exceedingly crying, and wrathing her body to and fro, like one in anguish of spirit. Her mother then asked her whether she was afraid that God would not give her salvation. She answered, "Yes, I am

¹²Ibid., p. 149.

¹³Ibid., p. 199.

afraid I shall go to hell!" Her mother then endeavored to quiet her, and told her she would not have her cry; she must be a good girl, and pray every day, and she hoped God would give her salvation. But this did not quiet her at all. . . .¹⁴

In Edwards' view, God, working perhaps through Phebe's brother, had frightened the youngster into an awareness of her need for salvation.

In the case of Abigail Hutchinson, God created the same need in quite a different manner; He made her envious of the "company keeper." Abigail was a frail young woman who was dying from some sort of esophageal blockage. "But her infirmity," Edwards quickly adds, "had never been observed at all to incline her to be notional or fanciful, or to occasion anything of religious melancholy."¹⁵ It was probably God, therefore, not the "melancholy" which caused her reaction to "the news of the conversion of the young woman before mentioned [the 'company keeper']"¹⁶

This news wrought much upon her, and stirred up a spirit of envy in her towards this young woman, whom she thought very unworthy of being distinguished from others by such a mercy; but withal it engaged her in a firm resolution to do her utmost to obtain the blessing."¹⁷

"If God sees fit to transform the heart of such a woman,"

¹⁴Ibid., p. 200.

¹⁵Ibid., p. 191.

¹⁶Ibid., p. 192. On Edwards and the notion of melancholy see Gail Thain Parker, "Jonathan Edwards and Melancholy," New England Quarterly, 1968, 41, 193-212.

¹⁷Faithful Narrative, p. 192.

Abigail must have said to herself, "then surely I too can reap the benefits of grace." Her next step would be to plan a strategy for reaching her goal; that is, to determine more precisely the nature of "her utmost."

This, then, is how God begins his dispensation of grace: by motivating those who were created in His image but have gone astray, in order that they eventually escape the eternal fires of the Evil One. Man begins to plan and act, according to Edwards, only when he perceives an incongruity between here--his current condition--and there--his goal.¹⁸ God does not create a new imbalance; He simply "awakens" the individual by providing him with clearer, more accurate pictures of both "here" and "there." The person becomes fearfully aware that he is in sad spiritual straits and if he doesn't do something about it he will burn forever in hell. That is his unfortunate status. The pre-convert also becomes increasingly aware of the nature of the goal through his observations of inspired demonstrations, such as the "company keeper." The more the awakening person discovers about his actual and ideal self, the more the gulf between them seems to widen. When the discrepancy becomes unbearable, the equilibrium is destroyed, and the person initiates a plan, or a group of plans, which are designed to eliminate the perceived incongruity in his spiritual system. The proactive search for God and His grace begins.

¹⁸See Figure 8, p. 159 (the TOTE Unit) for a pictorial representation of the function of need.

Test₁: The Fruitless Search for

God and Salvation

After being awakened to his precarious spiritual state, a person begins casting about in every direction trying, so it appears, to make up for lost time. He becomes a pious busy-body, reading scripture voraciously, going to church often, and doing good. During this frenzied period of what he called "legal strivings," Edwards observed that awakened persons expend nearly all their physical and psychological energy in pursuit of their salvation. This sudden shift from careless complacency to earnest performance of good works had certain practical advantages, as Edwards, minister of an often raucous frontier settlement, was eager to point out.

These awakenings when they have first seized on persons have had two effects: one was that they have brought them immediately to quit their sinful practices, and the looser sort have been brought to forsake and dread their former vices and extravagancies. When once the Spirit of God began to be so wonderfully poured out in a general way through the town, people had soon done with their old quarrels, backbitings, and intermeddling with other men's matters; the tavern was soon left empty, and persons kept very much at home; none went abroad unless on necessary business, or on some religious account, and every day seemed in many respects like a Sabbath day. And the other effect was, that it put them on earnest application to the means of salvation--reading, prayer, meditation, the ordinances of God's House, and private conference; their cry was "What shall I do to be saved?" The place of resort was now altered; it was no longer the tavern, but the minister's house, that was thronged far more than ever the tavern had wont to be.¹⁹

¹⁹Faithful Narrative, pp. 160-161.

The awakened, it seems, are consumed with their plan for salvation which is, as Edwards notes, comprised of numerous sub-plans, or sub-routines like reading, prayer, etc.²⁰ Each of these sub-routines requires the expenditure of conscious effort and each, therefore, may be characterized as a sequential process.²¹ The awakened person tries to proceed toward his goal as quickly as possible. There is, in his view, no time to lose. Phebe Bartlet, for instance, prayed alone "five or six times in a day" at the height of her "legal strivings."²² Abigail Hutchinson, on the other hand, undertook to educate herself.

. . . she thought she had not a sufficient knowledge of the principles of religion to render her capable of conversion; whereupon she resolved thoroughly to search the scriptures; and accordingly immediately began at the beginning of the Bible, intending to read it through.²³

This eventually-fruitless decision clearly illustrates the philosophy of the newly awakened: it is better to do something rather than do nothing. The planning and seeking, though certainly goal-oriented and consciously directed, often appears more like reflexive, spastic, lurching rather than smooth progression toward grace. Many activities are carried on simultaneously, in the hope that one or more will work.

²⁰Compare this with William James' plan for rising from bed in the morning (Figure 7, p. 158).

²¹See above, pp. 161-165, for a discussion of sequential processing. Note especially Figure 11, p. 169 and Figure 12, p. 178.

²²Faithful Narrative, p. 199.

²³Ibid., p. 192.

Unfortunately, according to Edwards, none of the elaborate plans and activities ever work. The newly awakened are destined for failure after failure until they become wrung out, exhausted, disillusioned, and more convinced than ever of their own worthlessness. Why does God lead men through such a frustrating, hopeless ordeal? Because, in Edwards' view, God is not just there for the taking. Arrogant man, with his confident schemes and plans, must learn through hard experience the humility that is appropriate to one who is utterly dependent on another.

The drift of the Spirit of God in his legal strivings with persons, has seemed most evidently to be, to make way for, and to bring to, a conviction of their absolute dependence on his sovereign power and grace, and universal necessity of a Mediator, by leading them more and more to a sense of their exceeding wickedness and guiltiness in his sight; the pollution and insufficiency of their own righteousness, that they can in no wise help themselves, and that God would be wholly just and righteous in rejecting them, and all that they do, and in casting them off forever . . .²⁴

The frustrating period of "legal strivings" is God's presentation to man of an operational definition of the need that is felt in the initial awakening. The whole process of planning and searching for God is initiated by some perceived incongruity between one's present state and a state of saving grace. Yet this need is what Edwards often called "motional"; it involves only a sort of intellectual, detached assent to a

²⁴Ibid., pp. 163-164. Edwards made this point most convincingly in an early, important sermon, "God Glorified in the Work of Redemption, by the Greatness of Man's Dependence upon Him, in the Whole of It." In Dwight, ed., Works, pp. 149-162.

proposition. The need felt by a person who has striven and struggled and failed utterly is far more profound than this. It is a need that is felt in the viscera and documented with the data of his own wretched experience. Like Abigail Hutchinson, all awakened seekers after grace must acknowledge that the absolute corruption of their hearts is such "that the sin which she brought into the world with her was alone sufficient to condemn her."²⁵ The need to obtain grace is thus transformed into a need to receive it; all human plans must be relinquished in favor of God's Plan. The discovery of God always comes on God's terms.

After the awakened person concludes that he cannot save himself, he lays his fate at God's doorstep. The frantic phase of proactive seeking gives way to patient, reactive waiting.

. . . a general hope arises that some time or other God will be gracious, even before any distinct and particular discoveries of mercy; and often they then come to a conclusion within themselves, that they will be at God's feet and wait his time, and they rest in that, not being sensible that the Spirit of God has now brought them to a frame whereby they are prepared for mercy.²⁶

This is the "frame" of mind in which, as Edwards put it, "gracious discoveries . . . are given."²⁷

But what kind of "frame" is it that leads to important "discoveries," such as when one discovers "mercy"?²⁸ Edwards

²⁵Faithful Narrative, p. 193.

²⁶Ibid., pp. 169-170.

²⁷Ibid., p. 171.

²⁸At various times Edwards referred to the essence of conversion as "mercy," "the divine and supernatural

didn't know, and James and Starbuck, 160 years later, could only say that converts usually "relax" just before the conversion experience.

What then must the person do? "He must relax," say Dr. Starbuck--"that is, he must fall back on the larger power that makes for righteousness, which has been welling up in his own being, and let it finish in its own way the work it has begun. . . . The act of yielding, in this point of view, is giving one's self over to the new personality, and living, from within, the truth of it which had before been viewed objectively."

. . . To state it in terms of our own symbolism: When the new center of personal energy has been subconsciously incubated so long as to be just ready to open into flower, "hands off" is the only word for us, it must burst forth unaided.²⁹

Information-processing theory describes such a "frame," or what Starbuck calls "the act of yielding," as one in which information is processed in parallel.³⁰ One relaxes his characteristic planning and executing and lets his focus of attention wander into the emotionally-laden pandemonium at the fringes of his stream of consciousness. Under certain circumstances, for instance, an individual may relinquish his plans for those of another, as in hypnosis, or the result may be some other kind of trance state in which information from the unconscious and the environment bombards the person in no apparent logical sequence.³¹ Many aspects of trance

light," "divine love," "grace," and "a vital, indwelling principle."

²⁹William James, Varieties, p. 175. James quotes from Edwin D. Starbuck, The Psychology of Religion (London, 1901), p. 115.

³⁰See above, Figure 10, p. 166, and pp. 163-167 for a discussion and model of parallel processing.

³¹For an acute analysis of the trance state, consult

phenomena are present in Edwards' detailed description of Abigail Hutchinson's conversion. In the early phases of her conversion experience," she saw nothing but blackness of darkness before her." In the midst of her ordeal, "she almost fainted" at the mere sight of "three persons who were thought to have been lately converted." Finally, she "continued whole days and whole nights in a constant ravishing view of the glory of God and Christ."³² Clearly, Abigail had entered a "frame" or state in which conscious, goal-directed planning and depositing of information into rubrics and categories had given way to direct, emotional "ravishing" communication.

What is the result of relinquishing a plan or plans? If the relinquishment is preceded by vigorous planning, as it clearly must for Edwards' converts, the result is often a creative insight, a new way of looking at things.³³ Recall

Shor, "Generalized Reality Orientation," and "Three Dimensions of Hypnotic Depth," International Journal of Clinical and Experimental Hypnosis, 1962, 10, 23-38. Neisser has attempted to present trance phenomena in the language of information processing; see Cognitive Psychology, Chapter 11. See also Ernest R. Hilgard, "The Domain of Hypnosis: With Some Comments on Alternative Paradigms," American Psychologist, 1973, 28, 972-982, for a discussion of trance versus non-trance theories of hypnosis and the classic analysis by Martin Orne demonstrating the reality of "trance logic": "The Nature of Hypnosis: Artifact and Essence," Journal of Abnormal and Social Psychology, 1959, 58, 277-299.

³²Faithful Narrative, pp. 192-195.

³³On trance and creativity see Stanley Krippner, "The Psychedelic State, the Hypnotic Trance and the Creative Act." In Tart, ed., Altered States, pp. 271-290. A very influential theory of the creative process is that of Graham Wallas. In his view, the process traverses four stages: preparation, incubation, illumination, and revision. This theory is similar, in its basic aspects, to the cybernetic model and to Edwards' description of conversion. See Art of Thought (London, 1926).

that man, according to information-processing theory, is characterized by multiple processing: a sequential, conscious train of thought and a parallel, most unconscious, emotionally-laden intruder. It is now common to attribute creative insights to a fusion of emotional, unconscious needs with logical, conscious considerations. It is here, and only here, that Edwards and information-processing theory part company altogether. For Edwards, the intrusions came not from some unconscious mind or from peripheral aspects of the environment but from his Calvinist God. Poets, scientists, musicians and artists make discoveries. To the converts of Edwards, however, "gracious discoveries . . . are given."³⁴

When Jesus invited men to "seek and ye shall find," he had in mind, according to Edwards, a search that is incredibly arduous and complex. After God establishes some initial incongruity, after a person becomes awakened and concerned about his spiritual estate, he is confronted with a problem which he cannot possibly solve. Unfortunately, he is unaware of his incompetence and his elaborate proactive planning and activity bring only frustration and anxiety. Finally, these frustrated, humiliated people give up as they are "brought to the borders of despair, and it looks as black as midnight to them a little before the day dawns in their souls."³⁵ They wait, quietly, desperate and hopeless, for the

³⁴Faithful Narrative, p. 171, my italics.

³⁵Ibid., p. 162.

rays of an unknown sun to enlighten their minds. When the dawn comes, unexpectedly and in a lightening flash, their minds will be fundamentally altered by "gracious discoveries." This profound psychological alteration brought by spiritual "dawn" is the heart of Edwards' psychological system, and it is his explanation of this remarkable phenomenon that we shall now examine, armed with a few contemporary concepts.

Some Organizing Concepts: A Preface
to the Operation of the Spirit
in Conversion

Reduced to its lowest terms, Edwards' view of conversion condenses to a remarkably simple, though fundamental, alteration of the mind. In order to appreciate the importance of the psychological change wrought by conversion, however, it is necessary to understand the essential attribute of the Edwardsean mind: unity. In this section, therefore, we shall make a brief, but vitally necessary, digression into Edwardsean mental mechanics. We will examine his transsummative concept of mind much more thoroughly than we have thus far.

Thinking, feeling, and willing are not, in Edwards' view, isolated human activities which reflect a set of discrete mental entities which are the "seat" of each. Augustine had been right. The mind is more like a New Worldmelting pot than an Old World ghetto. The constituents have lost their identity through intermarriage and the sharing of

responsibilities. To Edwards, the most significant mental miscengenation is between reason and emotion. Man is a transsummative, rational-emotive unity, and it is this union which makes him appear disarmingly simple in theory, and hopelessly complex in practice.

Perhaps man's most characteristically "rational" activity would appear to be consciously weighing two or more alternative actions, and eventually choosing one over the others. From Edwards' day down to the present, those who have claimed that man has a "free will" have emphasized the importance of man's capacity for rational judgment and choice. Of course, if there is such a thing as an absolutely rational choice, or act, then Edwards' transsummative poission is false. He had to prove, therefore, that

The will, and the affections of the soul, are not two faculties; the affections are not essentially distinct from the will, nor do they differ from the mere actings of the will and inclination of the soul, but only in the liveliness and sensibleness of exercise.³⁶

If he could demonstrate that every act of will, every rational choice, has an emotional component, he would effectively undercut any effort to treat them as independent "faculties." If willing and the affections always appear together, it is very misleading to consider them as anything other than completely integrated and unified.

Keep in mind that Edwards undertook to defend two extremely unpopular notions: the determination of "the will,"

³⁶Affections, p. 97.

and the fundamental importance of man's irrational capacities. Faced with a very similar dilemma 150 years later, Freud's strategy was first to ingratiate himself with a hostile audience and then slowly and subtly destroy their basic assumptions.³⁷ Edwards followed the same strategy. Of course, he agreed, men weigh alternatives and decide, without coercion, the course of action they will take. If a man decides to take a walk then, in one sense, his decision is both free and rational.³⁸ His motive, according to this position is the physical object in view: the need to walk or, perhaps, the attraction to walking. Thus far Edwards had nothing threatening or objectionable to the Arminians; he simply summarized their position.

Edwards never actually disagreed with the Arminian analysis of will. Instead, he discarded it as superficial and irrelevant. The rational or "free will" position failed to notice a common denominator among the infinite number of "motives" that impell men to action.³⁹ It failed to recognize that

. . . the will is as the greatest apparent good is, . . . that volition has always for its object the thing which appears most agreeable; it must be carefully observed,

³⁷Cf. A General Introduction to Psychoanalysis (New York, 1968).

³⁸Will, p. 147.

³⁹On Edwards' re-definition of motive, see Haroutunian, Piety versus Moralism, pp. 220-229. On the same topic, but emphasizing the influence of Locke on Edwards' concept of motive, see Paul Ramsey, "Editor's Introduction" to Edwards' Freedom of the Will, pp. 47-64.

to avoid confusion and needless objection, that I speak of the direct and immediate object of the act of volition; and not some object that the act of will has not an immediate, but only an indirect and remote respect to.⁴⁰

In Edwards' view, the particular choice--to walk, talk, etc., is of secondary importance. Whatever the supposed goal, there is an incontrovertible law of human nature which necessitates a person to always choose that alternative which seems to provide the greatest good or pleasure or least pain. There are no exceptions. Thus,

. . . the will is determined by the greatest apparent good, or by what seems most agreeable; because an appearing most agreeable or pleasing to the mind, and the mind's preferring and choosing, seem hardly to be properly and perfectly distinct.⁴¹

Paradoxically, man chooses between alternatives, but he has no alternative other than choosing that which he likes. On Edwards' level of analysis, therefore, man has no choice.

Unlike the conscious, considered choice of an "indirect" object, the selection of likes and dislikes is usually made unconsciously. Edwards acknowledged that "reason," conscious choice, is sometimes instrumental in determining whether an object appears agreeable or disagreeable. Often, however, it is not, as Edwards notes in a ponderous but significant restatement of the dilemma of St. Paul:

When it [reason] concurs with other things, then its weight is added to them, as put into the same scale; but when it is against them, it is as a weight in the opposite scale, where it resists the influence of other things: yet its resistance is often overcome by their

⁴⁰Will, p. 143.

⁴¹Ibid., p. 144; Edwards' italics.

greater weight, and so the act of the will is determined in opposition to it.⁴²

"Other things" often determine a course of action. A choice is made, an object is sought for its beauty or ugliness, symmetry or asymmetry, harmony or discord, for its sweet smell or pungent stench.⁴³ Each of these, and an infinity of "other things," aesthetic considerations, usually register, if at all, as vague but vitally important feelings. Much later, Freud would deal specifically with these emotionally-laden "other things." Edwards was content merely to note their existence and importance.⁴⁴

Like Freud, Edwards re-defined the usual concept of motivation. A motive is not that which is consciously desired or "in the view of the mind," as he often put it. Rather, a motive is a group of affectionate, emotional considerations which either attract us toward or repel us from some "rational" alternative.⁴⁵

We see the world of mankind to be exceedingly busy and active; and the affections of men are the springs of the motion: take away all love and hatred, all hope and fear, all anger, zeal, and affectionate desire, and the world would be, in a great measure, motionless and dead; there would be no such thing as activity amongst mankind, or any earnest pursuit whatsoever.⁴⁶

⁴²Ibid., p. 148. On St. Paul, see above, p. 133.

⁴³See Will, pp. 145-146, for Edwards' list of reasons why objects appear agreeable or disagreeable.

⁴⁴This may have been what Perry Miller had in mind when he made his cryptic remarks about Edwards and Freud; see above, p. 72.

⁴⁵Will, p. 141.

⁴⁶Affections, p. 101.

Every human action is a complex mixture of reason and emotion. This simple fact represents to Edwards a kind of phenotypic expression of the underlying, genotypic, psychological reality.

I humbly conceive that the affections of the soul are not properly distinguished from the will, as though they were two faculties in the soul. All acts of the affections of the soul are in some sense acts of the will, and all acts of the will are acts of the affections. All exercises of the will are in some degree or other, exercises of the soul's appetite or aversion; or which is the same thing, of its love or hatred. The soul wills one thing rather than another, or chooses one thing rather than another, no otherwise than as it loves one thing more than another; but love and hatred are affections of the soul: and therefore all acts of the will are truly acts of the affections.⁴⁷

Edwards made his point convincingly. All our plans and acts are in some measure a function of our likes and dislikes, love and hatred, of our own peculiar sense of what is beautiful and what is ugly.

The Puritan and neo-Platonic churchmen from whom Edwards inherited the faculty psychology drew a psychological portrait of man that was theoretically complex but practically quite simple. A stimulus would be passively received and its resulting "phantasm" was said to leapfrog through a host of independent faculties until it reached a kind of executive faculty, "Reason." It could make its decisions independently of the affections. Man was thus seen as a piece of complicated machinery whose conduct, however, was a rather simple function of the choices made by his rational faculty. In

⁴⁷ Some Thoughts Concerning the Present Revival of Religion in New England, in Goen, ed., Great Awakening, pp. 291-530, p. 297.

spite of an ornate, byzantine mental arrangement, human thinking and behavior was rendered quite explicable and even predictable.⁴⁸ Edwards, however, inverted this arrangement. His conception of the mind was starkly simple; he acknowledged only understanding and will-affections, and then only as convenient fictions rather than physiological entities. Furthermore, by uniting the will and affections, the structurally-simple Edwardsean man emerges as one whose thinking and behavior is caused mostly by complex, uncontrollable, even unknowable unconscious emotional forces.

Thus far we have considered only what might be called experiential indices of Edwards' transsumative view of man. Since rational acts of will like planning, choosing, and acting are motivated by emotional needs, then it may be inferred that man's mental structure is a rational-emotive unity. Edwards was not fond, however, of permitting his readers to make inferences. Readers, being sinful and corrupt, might not infer properly. He therefore undertook to analyze the precise nature of the relationship between the two mental functions (not structures) which he acknowledged, understanding and will-affections.

When first focusing his microscope on the mind, or soul, itself, Edwards sound respectably traditional, except for the poverty of "faculties" and the integrated will-affections.

⁴⁸See Miller, Seventeenth Century, chapt. 9, "The Nature of Man."

God has indued the soul with two faculties: one is that by which it is capable of perception and speculation, or by which it discerns and judges of things; which is called the understanding. The other faculty is that by which the soul does not merely perceive and view things, but is in some way inclined with respect to the things it views or considers . . . either as liking or disliking, pleased or displeased, approving or rejecting. This faculty is called by various names: it is sometimes called the inclination: and, as it has respect to the actions that are determined and governed by it, is called the will: and the mind, with regard to the exercises of this faculty, is often called the heart.⁴⁹

Some commentators have jumped to the hasty conclusion that this statement "proves" that Edwards was only a modified "faculty psychologist" who had honed Occam's razor to an uncommonly sharp cutting edge.⁵⁰ These misinterpreters have simply failed to read on and discover what Edwards had to say about the relationship between these "faculties."

Edwards distinguished between two kinds of understanding. A person can possess a "mere notional understanding, wherein the mind only beholds things in the exercise of a speculative faculty."⁵¹ This level of understanding, which implies a minimum of personal participation and involvement, is held by Edwards to be inadequate at best, and at worst representative of serious pathology. A person who refuses to get involved with the object of his attention, to take a position with regard to it, to experience it, has, according

⁴⁹ Affections, p. 96 (Edwards' italics).

⁵⁰ Cf. Fay, American Psychology, and Roback, History.

⁵¹ Affections, p. 272.

to Edwards, useless knowledge.⁵² It can never lead to constructive action because emotional involvement, absent in a "notional understanding," motivates the will. So-called "rationalists," therefore, those who seek to keep their emotions in check, are guilty of denying a basic human function.

This useless "notional understanding" must be contrasted with the understanding which Edwards called "a sense of the heart."

I say a sense of heart; for it is not speculation merely that is concerned in this kind of understanding: nor can there be a clear distinction made between the two faculties of understanding and will, as acting distinctly and separately, in this matter. When the mind is sensible of the sweet beauty and amiableness of a thing, that implies a sensibleness of sweetness and delight in the presence of the idea of it: and this sensibleness of the amiableness or delightfulness of beauty, carries in the very nature of it, the sense of the heart; or an effect and impression the soul is the subject of as a substance possessed of taste, inclination and will.⁵³

Scholastic distinctions must be discarded in light of the evidence. It cannot be denied, claims Edwards, that "he that has perceived the sweet taste of honey, knows much more about it, than he who has only looked upon and felt of it."⁵⁴ "A sense of the heart" implies a simultaneous dispensation of heat and light: the receiving of information that is cared about. Knowledge about and knowledge, in other words, are

⁵²For a modern and rather complete analogue to this aspect of Edwards' "Sense of the Heart," see Schachtel's concept of "allocentric perception" in Metamorphosis.

⁵³Affections, p. 272.

⁵⁴Ibid., p. 272.

not equivalent. In the latter Edwards found evidence that man's psyche is meant to function as a fully-integrated, rational-emotive unity that transcends the artificial boundaries which traditionally distort discussion of these aspects of human functioning.⁵⁵

Edwards had built his case for the singular importance of the affections. In all our plans and acts, in our basic understanding and perception of the world, emotional considerations play a vital role. But Man is a rational, reasonable creature, or so the argument ran among the more "enlightened" of Edwards' colleagues in an age that was eventually to be called the Enlightenment, or the Age of Reason. In Edwards' view, however, man's rationality is only an illusion; a substratum of emotional needs determines every act we commit, every direction that we look, and every inference we make. The transsummative, multiple-processing hypothesis could hardly have been presented more forcefully than this.

But why labor to the bone in order to demonstrate the superordinate significance of the emotions? What reason was there to construct an elaborate psychological theory that was virtually incomprehensible but apparently in opposition to nearly every "enlightened" view of the day? It was simply this: Edwards believed the affectionate outpourings of the Great Awakening represented a valid work of God and not a

⁵⁵On Edwards and the integrity of the "self," see Delatte, Beauty and Sensibility, pp. 1-11.

dance of lunatics, as some would have it. It was true that there had been many emotional excess which could hardly be interpreted as works of the Holy Spirit. Yet he resolutely refused to believe that the emotional blandishments were unnecessary, even harmful, artifacts. Emotion must be an integral component of coming to grace. Somewhere, far beneath the raving and ranting, the shouting, sweating, and speaking in tongues, Edwards thought he discerned a profound truth: "true religion, in great part, consists in holy affections."⁵⁶

The entire psychological system of Edwards reduces to a justification for equating true religion with emotional involvement. He had said that man is a creature whose every act and every perception is emotionally motivated, and that true understanding, therefore, consists in a sense of the heart--a total grasp involving not only speculative judgment but loving and/or hating. A person constructed in such a manner can come to know God, then, in only one way, with a total commitment of all his intellectual and emotional resources. Spiritual understanding is but a very special case of a sense of the heart.

Spiritual understanding primarily consists in this sense, or taste of the moral beauty of divine things; so that no knowledge can be called spiritual, and further than it arises from this, and has this in it. But secondarily, it includes that all discerning and knowledge of things of religion, which depends upon, and flows from such a sense.⁵⁷

⁵⁶ Affections, p. 95; see also p. 101.

⁵⁷ Ibid., p. 273.

Both before and after conversion a person is attracted to that which he likes and repelled by that which he dislikes. He is "free" to consciously choose among alternatives but, at a deeper level, he must choose that which appears more attractive or lovely to him. Before conversion, due to his originally sinful nature, a person can have only a "notional understanding" of "divine things," at best. He does not love or relish God and the beauty of divine works in such a way that he can do no other. He needs, according to Edwards, to have his affections made more congruent with those of God Himself so that his thinking, perceiving, and acting more closely approximate the manner in which God might accomplish these tasks. This occurs, as we shall now see, during the "gracious discoveries" of conversion.

Operate: The Discovery of Divine Love

On the surface it would appear that the conversion experience has no analogue. It neatly divides a person's life into two discrete units: sinner and saint, dead and re-born, lost and saved. In this before and after montage, spiritual weakness is miraculously transformed into spiritual strength. An individual may believe he is so fundamentally different after conversion that, like St. Paul, he changes his residence, his occupation, and even his name. These uniquely devastating effects of conversion, combined with its hypothesized supernatural origins, have generally discouraged investigation into the precise nature or essence of the event. Even

the great James called off his investigation of conversion far short of trying to isolate its essence.

If the grace of God miraculously operates, it probably operates through the subliminal door, then. But just how anything operates in this region is still unexplained, and we shall do well now to say good-bye to the process of transformation altogether--leaving it, if you like, a good deal of a psychological or theological mystery--and to turn our attention to the fruits of the religious condition, no matter in what way they may have been produced.⁵⁸

How, it might be asked, can the mental operations of conversion be explained when the mind, the conversional arena, can never be known directly, and the supernatural stimulus cannot be known at all? Edwards rushed in where James and most other psychologists of religion have feared to tread.⁵⁹ In his attempt to describe and explain the precise psychological change incurred at conversion, Edwards culminated his courageous, profound, yet ultimately frustrating descent into cognitive psychology.

To Edwards, as well as most other Protestant theologians, it was baldly obvious that sinners and saints behave differently. Edwards was merely re-stating what seemed to be an ancient truism when he drew the obvious conclusion from this.

⁵⁹Of course, many "faculty" psychologists offered opinions on conversion. These were hardly explanations, however. They usually stated merely that certain mythical entities ("faculties") had somehow been miraculously transformed. The question, of course, is how does this occur; and how is it reflected in perception and behavior? Edwards addressed himself to all these questions.

Hence it will follow, that the sense of things of religion that a natural man has, is not only not to the same degree, but nothing of same nature with that which a true saint has.

The reason why natural men have no knowledge of spiritual things is because they have nothing of the Spirit of God dwelling in them.⁶⁰

The converted person, he who has the Holy Spirit dwelling within him, differs in some absolutely fundamental way from the person who lacks the Spirit.

But wherein, exactly, lay the saintly psychological monopoly? How does the Spirit interact with the mind of the converted? Edwards usually refers to the presence of the Spirit in conversion as a "principle," "principles" or sometimes an "indwelling vital principle."⁶¹ "There is some one holy principle in the heart," he said, "that is the essence and sum of all grace, the root and source of all holy acts of every kind."⁶² The establishment of the new principle is an affair of the heart, which is Edwards way of saying that it has something to do with the affections. Moreover, the emotional re-orientation represented by the spiritual principle is no simple usurpation by God of human functions. Nothing in the mind is replaced, yet the entire mind is reorganized and given a new direction.⁶³ Although he admitted

⁶⁰Treatise on Grace, ed. by Paul Helm (London, 1971), p. 29.

⁶¹Cf. Affections, pp. 200-207, Grace, and "Divine Light," for dozens of examples of Edwards' use of the term "principle."

⁶²Grace, p. 40.

⁶³Cf. Affections, p. 206, and "Divine Light," p. 179.

the vagary and inadequacy of his notion of "principle," Edwards left no doubt that it is a cognitive structure of some sort.

I use the word "principles," for want of a more determinate signification. By a principle of nature in this place, I mean that foundation which is laid in nature, either old or new, for any particular manner or kind of exercise of the faculties of the soul: or a natural habit or foundation for action, giving a person ability and disposition to exert the faculties in exercises of such a certain kind; so that to exert the faculties in that kind of exercises, may be said to be his nature. So this new spiritual sense is not a new faculty of understanding, but it is a new foundation laid in the nature of the soul.⁶⁴

The "natural habits or foundations" in the soul (or mind) are now commonly called cognitive structures or schemas.⁶⁵ These cognitive constructs represent mental categories or rubrics which permit us to interpret and organize our experience. It seems clear that the Edwardsean "principle" accomplishes a fundamental alteration and organization of the experience of the convert.

The cognitive realignment accomplished by the indwelling vital principle has an effect similar to reversing the poles on a magnet. Former attraction become repellant and vice versa. The magnet, like the convert, has no choice in the matter. After the reversal, the magnet interacts with the

⁶⁴ Affections, p. 206.

⁶⁵ For a good general introduction to the concept of schemas and cognitive structures, see Ezra Stodtland and Lance Cannon, Social Psychology: A Cognitive Approach (Philadelphia, 1972), chapt. 1. A more technical introduction to the topic, but one which is more pertinent to the present discussion, may be found in Neisser, Cognitive Psychology, pp. 286-292.

world in a manner which is fundamentally different from before the change. For the convert, behavioral changes are a function of his new Image; his cognitive picture of himself and his place in the universe has changed. The "gracious discoveries" of God's beauty and the love of Him are accompanied, quite literally, by the discovery of a world which seems startlingly new. The world is now seen, as it were, through the eyes of God. In the following passage, one of the most significant psychological statements he ever made, we see Edwards struggling desperately to describe the psychological significance of the newness, the sense of creative discovery, inherent in conversion. The vital indwelling principle emerges as a principle of cognitive reorganization.

If grace be . . . an entirely new kind of principle; then the exercises of it are also entirely a new kind of exercises. And if there be in the soul a new sort of exercises which it is conscious of, which the soul knew nothing of before, and which no improvement, composition or management of what it was before conscious or sensible of, could produce, or anything like it; then it follows that the mind has an entirely new kind of perception or sensation; and here is, as it were, a new spiritual sense that the mind has, or a principle of new kind of perception or spiritual sensation, which is in its whole nature different from any former kinds of sensation of the mind.⁶⁶

The "new kind of exercises" imparted by the "principle" are thus interpretive and organizational exercises of the mind. The discoveries of conversion, like all other creative discoveries, consist not in the novel manipulation of the physical environment, but in mental reorganization of information.

⁶⁶Affections, pp. 205-206.

Like cognitive psychologists of all eras, Edwards was frustrated by the invisibility of the mind. Neither he nor his readers had a frame of reference with which to evaluate a discussion of mental functioning. No one had ever seen, nor would they ever see, a mind in operation, and certainly none had directly and objectively observed the operation of the Edwardsean "principle." When he attempted to describe the actual activity of the "principle," therefore, Edwards resorted to that historically unreliable but uniquely available device of cognitive psychologists--analogy.⁶⁷ In all the analogies which Edwards draws between the mysterious conversion "principle" and familiar, observable phenomena, he stresses the fundamental nature of the change. Something in the essence, or the core of a convert is altered. He not only acts and thinks differently than before, he literally is different.

"The word of God," Edwards remarked "abides in the heart of a regenerate person as a holy seed, a Divine principle there, though it may be but as a seed, a small thing." But, he reminds us, "the seed is a very small part of the plant, and is its first principle."⁶⁸ Edwards, of course, knew nothing of modern genetics but, if he had, he might have carried the analogy even further. The infusion of the divine "principle" is like giving a person a new set of genes. The

⁶⁷ See above, pp. 133-134 and 136-137.

⁶⁸ Grace, p. 32.

"principle" represents no mere face-lift which gives the appearance of youth; the convert is literally transformed into a spiritual babe, vigorous, clean, and new. He is, as evangelists have long been found of saying, born again. In another place, Edwards referred to the principle as a "divine, supernatural spring of action" in which converts ". . . don't only drink living water, but this living water becomes a well or fountain of water, in the soul, springing up into spiritual and everlasting life."⁶⁹ In still another analogy, Edwards remarked: "The light of the Sun of Righteousness don't only shine upon them, but is so communicated to them that they shine also, and become little images of that Sun which shines upon them."⁷⁰ Converted persons are not like the parasitic planets which derive their energy from elsewhere, but rather they resemble something like comets, each containing the vital glow of the energy source which spawned it.

The conversion "principle" is utterly fundamental. It therefore must involve or influence the most basic aspects of man's nature. Recall that Edwards, a synthetic psychologist, held to the hypothesis of multiple processing: all human thinking and action begins with the affections, with loving and hating. We see and do that which we like and avoid that which does not please us. The "principle" of grace, therefore, must accomplish a revolution in the affectional system, it must redistribute a person's deepest loves and hates. Further-

⁶⁹ Affections, p. 200.

⁷⁰ Ibid., pp. 200-201.

more, since it is the Holy Spirit of God which is united to the faculties of the soul," the basic motivating love of the convert must, in Edwards' view, be redirected toward God and all his works.⁷¹

That principle in the soul of the saints, which is the grand Christian virtue, and which is the soul and essence and summary comprehension of all grace, is a principle of Divine love.⁷²

Divine love, as it has God for its object, may thus be described. 'Tis the soul's relish of the supreme excellency of the Divine nature inclining the heart to God as the chief good.⁷³

Whereas before the infusion of the divine light an individual might be inclined toward card playing, drinking "frolicking," and other debaucheries, the heart of the reborn convert is inclined toward God and Godliness. That is, he is necessarily inclined. After conversion a person has a deeply-felt "sense" of God's beauty; he must yearn for, relish, and love God simply because he is now constructed that way. If we can assume that God loves Himself and all His perfect works, then a convert and God, according to Edwards, have similar tastes; they organize their experience in a singular fashion.

Although the divine "principle" is passively received from God, human mental activity, according to Edwards, is normally an active and strenuous operation. The laborious "exercises" which he postulates are now generally referred to

⁷¹Ibid., p. 200.

⁷²Grace, p. 40; Edwards' italics.

⁷³Ibid., pp. 48-49.

as information processing--the sorting, selecting, and depositing of information into categories or cognitive structures--background processing. Each new experience is interpretable only within the context provided by the cognitive background of past experience. Potential experience can never become actual until the appropriate cognitive structure has been created. Consider the following simple example of the importance of cognitive structures. You are asked to connect the following set of dots with four straight lines without lifting your pencil from the paper (Figure 14). Let us suppose that you try to solve the problem, fail repeatedly, and conclude that it is insoluble. You inform your neighbor of your difficulty and seek his sympathy. Instead of offering consolation, however, he takes your pencil and solves the problem with four deft strokes (Figure 15). You are amazed at your neighbor's brilliance until he tells you that he remembered the solution for a psychology class he took years ago.⁷⁴ Even after your amazement dissipates, however, you will still possess a fundamentally different view of the problem than you did before. You have discovered the areas outside the "dot box" which escaped your notice initially, and in any future

⁷⁴This is a simple example of the Gestalt principle of "functional fixedness." Solving difficult problems often involves reorganizing the entire field, or gestalt; i.e., looking at the problem in a way which is fundamentally different from the original approach. To the extent that one is incapable of such cognitive flexibility, he is functionally fixated. For applications of the principle to animal psychology, consult Wolfgang Köhler, *The Mentality of Apes* (New York, 1925). For applications to human problem solving, see

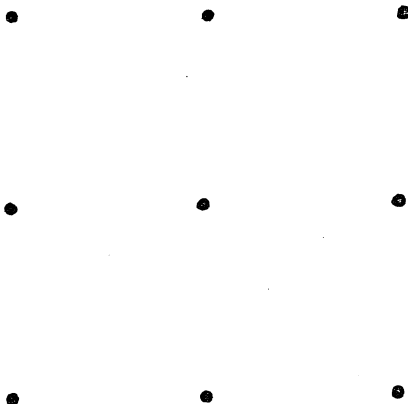


Figure 14. The dot problem.

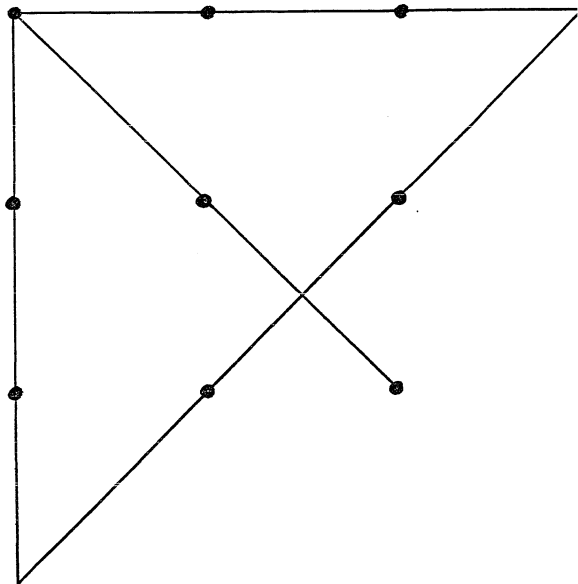


Figure 15. Solution to the dot problem.

encounters with the problem the solution will seem as obvious to you as it does to your neighbor. The addition of a cognitive structure has opened up an entirely new, if trivial, realm of experience.

Cognitive structures are for structuring; they provide each individual with a conglomerate device for interpreting his raw experience. They permit each person, in other words, to construct his reality as he develops. Nowhere is this more apparent than in the mental development of early childhood. Jean Piaget, the Swiss psychologist-philosopher, has given scientific respectability and precision to a bit of folk knowledge which any parent can substantiate: young children do not view the world as adults do.⁷⁵ Many remarkable discoveries--the acquisition of cognitive structures--are required before the child's reality becomes congruent, in its essential respects, with the reality of the adult. Two of Piaget's interpreters have summarized his position as follows:

The acquisition of a new structure of mental operations is a . . . form of learning which . . . Piaget feels, is the only stable and lasting type. It is only when the child has the prerequisite mental structure to assimilate new experiences that true learning takes place, and the possibility to generalize to novel situations becomes feasible. In other words, genuine learning occurs when the child has available the necessary mental equipment to

Karl Duncker, "On Problem-solving," trans. by L. S. Lees. Psychological Monographs, 1945, 58, Whole No. 270.; N. R. F. Maier, "Reasoning in Humans. I. On Direction," Journal of Comparative Psychology, 1930, 10, 115-143; and Max Wertheimer, Productive Thinking.

⁷⁵See especially Piaget's Construction of Reality.

make use of new experiences. When the requisite cognitive structure is present, he can learn from the world and come to understand reality; when the structure is absent, new experience has only superficial effects.⁷⁶

When the child acquires some new "mental equipment," the mind's "exercises," as Edwards called them, will permit a new and exciting apprehension of a tired old world. Each time this occurs, and Piaget believes there are a number of these fundamental discoveries in each normal child's development, the child's conception of the world moves one stage closer to that of the adult.

The acquisition of the "permanent object concept" is one of the most fascinating discoveries of early childhood. If an adult places a cake in an oven, closes the oven door, leaves the kitchen, and perhaps even shuts himself up in another room, he has no doubt that the cake is still in the oven. It is a very simple matter to conjure up a mental image of a cake inside an oven. For the young child, however, objects do not seem to exist independently of his perception of them. Until a child attains the age of approximately twelve months, for instance, he will not search for toys which have been placed under a cloth. Once an object leaves his sight, it seems, it ceases to exist.

Piaget has carefully demonstrated a number of stages through which a child must pass before he acquires a mature

⁷⁶Herbert Ginsburg and Sylvia Opper, Piaget's Theory of Intellectual Development: An Introduction (Englewood Cliffs, N.J., 1969), pp. 175-176.

object concept somewhere between eighteen months and two years. The final, dramatic discovery in the object-concept sequence is illustrated by two of Piaget's daughters: Lucienne, age fourteen months; and Jacqueline, age twenty months.

Lucienne is seated on a bed, between shawl A and cloth B. I hide a safety pin in my hand and my hand under the shawl. I remove my hand closed and empty. Lucienne opens it at once and looks for the pin. Not finding it she searches under the shawl and finds it. . . .

But with a beret, things become complicated. I put my watch in the beret and the beret under pillow A (on the right); Lucienne lifts the pillow, takes the beret, and removes the watch from it. Then I place the beret, again containing the watch, under cushion B on the left; Lucienne looks for it in B but, as it is hidden too far down for her to find it at once, she returns to A.

Then, twice, I raise cushion B so that Lucienne sees the beret obviously containing the object; both times she resumes looking in B but, not finding the watch right away, she returns to A! She searches even longer in A than in B after having seen the object in B!⁷⁷

At this stage the infant is incapable of inference; he cannot infer movement of an object which he cannot see. The existence of the object, therefore, is still dependent on the child's perception of it.

Jacqueline is seated opposite three object screens, A, B and C (a beret, a handkerchief, and her jacket) aligned equidistant from each other. I hide a small pencil in my hand saying "Coucou, the pencil." The child had previously found it under A. I hold out my closed hand to her, put it under A, then under B, then under C (leaving the pencil under C); at each step I again extend my closed hand, repeating, "Coucou, the pencil." Jacqueline then searches for the pencil directly in C, finds it and laughs.⁷⁸

⁷⁷ Piaget, Construction of Reality, pp. 76-77; also quoted in Ginsburg and Oppen, Piaget's Theory, pp. 62-63.

⁷⁸ Piaget, Construction of Reality, pp. 79-80; also quoted in Ginsburg and Oppen, Piaget's Theory, pp. 65-66.

The child inferred that the object was moved from A to B to C, even though she did not see it move. Like an adult, Jacqueline formed a mental image of the object. For her, the pencil exists independently of her direct perception of it.

Every child eventually learns that there is some kind of a real permanent world out there. We may never know whether any noise is made by a falling tree in a vacant forest, but we know that trees can indeed fall even if no one is present to record the event. We can imagine it. The discovery of object permanence does not alter the raw information contained in Piaget's moving watch or pencil, but the acquisition of this cognitive structure revolutionizes the manner in which the information is organized and interpreted. This profound discovery significantly and irrevocably alters the life of each child.

Edwards claimed that the infusion of the "principle" of divine love led the mind to a "new sort of exercises" which permit a person to perceive things he has never seen before. Yet the world itself changes little; conversion is intrapsychic. The "gracious discoveries," like the acquisition of the permanent-object concept, cause a person to refocus his attention and reorganize familiar information. For infants, a plastic and ephemeral world becomes solid and stable. For Edwardsean converts, Godly beauty and truth are eagerly received into their appropriate, valid, and newly acquired categories.

Persons after their conversion often speak of things of religion as seeming new to them; that preaching is a new thing; that it seems to them they never heard preaching before; that the Bible is a new book: they find there new chapters, new psalms, new histories, because they see them in a new light.⁷⁹

We see, think, and act, according to Edwards, so as to maximize our pleasure and minimize our pain. Although much human activity is rational, conscious, and goal directed, we are always attracted to that which we love and repelled by that which we hate. This is the essence of the transsumative hypothesis--man is a rational-emotive unity. The "vital, indwelling principle," a new cognitive structure or principle of mental reorganization, is rooted ultimately in a reorientation of the emotions. A convert thinks, and acts, and views the world differently because he feels differently; he is drawn by his love of God inexorably toward Godliness. When this occurs, Edwards says that God is apprehended with a "sense of the heart," with the total commitment of his combined rational and emotional resources. He takes a closer look at some things which formerly did not interest him, and he is amazed at what he finds. This is the essence of most discoveries.

Test₂: Evaluating the Validity of the Conversion Experience

After traversing the initial stages of the conversion sequence the concerned seeker quite naturally wishes to know

⁷⁹ Faithful Narrative, p. 181.

whether his "experience" has been a genuine conversion or a melancholic trauma or even a work of the devil. He reverts to what Edwards calls "reason," or sequential goal-directed thought, as he attempts to evaluate the validity of what he hopes has been a true conversion.

The evaluation of conversion validity presents some extraordinary difficulties which do not arise in most feed-back loops. In the familiar nail-hammering example described in chapter three, for example, one need only look at the nail to determine if the head of the nail is flush and the goal has thus been achieved.⁸⁰ Anyone with fair eyesight and a modicum of manual dexterity can make a speedy and more or less graceful exit from the loop. Unlike hammering a nail, however, a valid conversion is, in Edwards' view, strictly a cognitive phenomenon. The mental realignment resulting from a conversion obviously cannot be observed directly, and therefore it must be inferred indirectly from external signs. Unfortunately, estimating changes in hypothetical constructs like "mind" or "cognitive structures" is a risky business.⁸¹ The uncertainty of dealing with rarified mental entities is enough, under certain circumstances, to transform anyone into a modified behaviorist. If, for example, my daughter has been scolded for

⁸⁰ See above, pp. 155-157.

⁸¹ On the definition of "hypothetical constructs," and the difficulty of using them in explanations, see Kenneth MacCorquodale and Paul E. Meehl, "On a Distinction between Hypothetical Constructs and Intervening Variables," Psychological Review, 1948, 55, 95-107.

wrongdoing and then tells me of her love for me, I might ask her to "prove it" by exhibiting some behavior which can be interpreted as a function of an internal essence, Love.

But what are the signs of a valid conversion? Since Edwards viewed the cognitive alteration in conversion as fundamentally a revolution in the affections, an individual's emotional responses probably contain the most important insights into his experience. In particular, Edwards believed that the "sense of the heart" was most reliably exhibited in what he called "religious affections" or "holy affection." ". . . There is no true religion," he claimed, "where there is no religious affection."⁸² The surest sign that a conversion is valid, then, is an emotional outpouring of love for God and godliness.

The equation between valid conversion and the affections did not, however, provide the ultimate, or even a useful, criterion against which conversions might be measured. It merely focused attention on the affections by contending that in the absence of "raised affections," or emotional intensity, a conversion cannot have occurred. Yet it was obvious to all but the most rabid enthusiasts that the presence of emotional disturbances hardly guaranteed the presence of the Holy Spirit. People become emotionally aroused for many reasons, most of which are unrelated to conversion or even to religion. Sex, guns, food, earthquakes, politicians

⁸²Affections, p. 120; see also pp. 100-124.

and thousands of other things are all capable of raising the affections to an extraordinary degree. So, it appeared, are fanatical ministers, as the infamous Rev. James Davenport vividly demonstrated one evening in July, 1741:

Divers women were terrified and cried out exceedingly. When Mr. Davenport had dismissed the congregation some went out and others stayed; he then went into the broad alley [aisle], which was much crowded, and there he screamed out, "Come to Christ! Come to Christ! Come away!" Then he went into the third pew on the women's side, and kept there, sometimes singing, sometimes praying; he and his companions all taking their turns, and the women fainting and in hysterics. This confusion continued until ten o'clock at night. And then he went off singing through the streets.⁸³

That God should operate in such a fashion was, to Edwards, unthinkable. Raving and ranting are no sure signs of grace. Bizarre episodes like those involving Davenport, in fact, merely discredited all raised affections. ". . . false religion," said Edwards, "consisting in the counterfeits of the operations of the Spirit of God . . . tends greatly to wound and weaken the cause of vital religion . . ."⁸⁴ There was a desperate need, in other words, to distinguish between the affections.

There are false affections and there are true. A man's having much affection, don't prove that he has any true religion: but if he has no affection it proves that he has no true religion. The right way, is not to reject all affections, nor to approve all; but to distinguish between affections, approving some and rejecting others; separating between the wheat and the chaff, the gold and the dross, the precious and the vile.⁸⁵

⁸³The Diary of Joshua Hempstead, of New London, Connecticut (New London, Conn., 1902), p. 379; quoted in Goen, "Editor's Introduction," p. 52.

⁸⁴"True Grace Distinguished from the Experience of Devils." In Dwight, ed., Works, Vol. 6, pp. 232-261, p. 259.

⁸⁵Affections, p. 121.

A set of decision rules was needed which could establish a causative link between the essence of conversion--the restructuring of the mind--and its behavioral and experiential indices--certain aspects of emotional arousal.

The Calvinist hell is an awful place, and most New Englanders believed it to be the eternal residence of the unconverted. One could not sleep peacefully until he was sure that his alleged conversion was valid. Until the feedback from his own conversion experience was absolutely congruent with some criteria, there would be no exit from the conversion loop. Often, Edwards believed, the minister must provide the final assurances through a favorable interpretation of that affectional feedback.

Many continue a long time in a course of gracious exercises and experiences, and don't think themselves to be otherwise; and none knows how long they would continue so were they not helped by particular instruction.⁸⁶

It was impossible to instruct people concerning the state of their immortal soul, however, until a checklist of observable holy affections had been constructed. Until the affections were distinguished, the minister could offer only moral support to tormented but hopeful parishioners. "Particular instruction" to an aspiring convert without particular instructions for the minister would constitute an irresponsible and dangerous game.

Although certainly less important than the removal of the tortuous anxiety associated with individual conversions, a

⁸⁶Faithful Narrative, p. 175.

set of signs, or rules, would also help make life more fulfilling for the ministers. Edwards and his "New Light" colleagues were in the business of bring souls to Christ; that was, in theory, their primary function.⁸⁷ While each individual in the congregation agonized over the state of his own soul, the minister was often right beside him, lamenting his own inability to tell his parishioner the joyous words he desperately wanted to hear. Even Jonathan Edwards, the tall, pale, thin-lipped, epitome of ruthless Puritanism yearned to relax and celebrate the accomplishment of his goal: salvation for members of his congregation.

Yet I should account it a great calamity to be deprived of the comfort of rejoicing with those of my flock when there seems to be good evidence that those that were dead are alive.⁸⁸

Edwards, like his "flock," was in an uncomfortable situation. What would it be like to labor so long and hard and have no true converts? He needed "the comfort of rejoicing" over the fruits of his labor and God's mercy, and for this he needed "good evidence," which might be obtained only after the affections had been distinguished. Only then could he exit from his own ministerial loop (Figure 16).

In the period of the Great Awakening (ca. 1736-1746), therefore, a set of criteria for evaluating the validity of

⁸⁷This was especially true in Northampton, where Edwards' grandfather and predecessor in the pulpit had been conducting revivals, or "harvests," for fifty years. Stoddard's relationship to Edwards' psychological views is dealt with, in a peripheral fashion, by John E. Smith, "Editor's Introduction," pp. 57-60, and more specifically by James G. Blight, "Solomon Stoddard."

⁸⁸Faithful Narrative, p. 176.

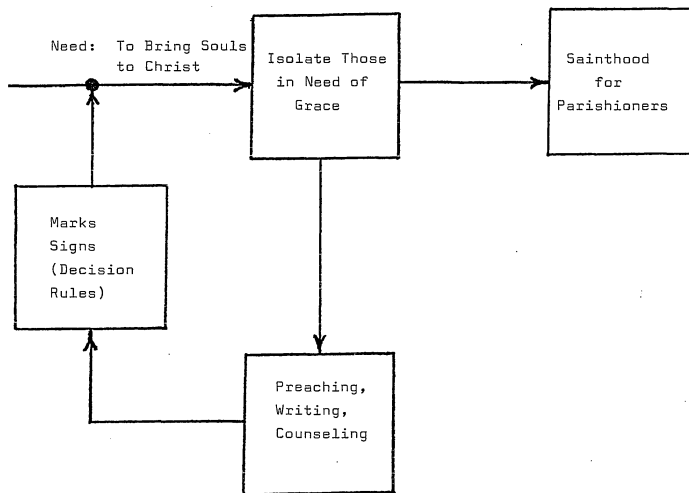


Figure 16. The ministerial feedback loop of an evangelical minister.

the conversion experience was needed for a variety of reasons. Many people thought they had been converted but they needed to know for sure. Conscientious evangelical ministers, like Edwards, also needed to be sure, lest they mislead an unwitting soul into hell. Edwards, in addition, had a unique interest in distinguishing between holy and spurious affections. He was the acknowledged leader and spokesman of a group of minister-theologians who sought to defend a middle position against rationalists led by Charles Chauncy of Boston, on the one hand, and fanatical enthusiasts like Davenport on the other.⁸⁹ Both sides needed to be shown that the acceptance of emotion as the core of religious experience need not degenerate into animal-like excesses.⁹⁰

Edwards' initial task was to demonstrate that valid, reliable, and observable signs of conversion are theoretically possible. For this assignment, he was well armed with his transsumative doctrine: ". . . all acts of the will," he said, "are truly acts of the affections."⁹¹ Human functioning

⁸⁹Other important "New Lights" were Gilbert Tennet and Jonathan Dickinson, both of New Jersey. An analysis of their views may be found in Sweet, Revivalism in America, and excerpts from their writings are in Heimert and Miller, Great Awakening.

⁹⁰The religious aberrations of the awakening were catalogued by Charles Chauncy in his Seasonable Thoughts on the State of Religion in New England, a Treatise in Five Parts (Boston, 1743). Two thirds of this large book (424 pages) is devoted to the documentation of seizures, faintings, etc., resulting from New Light preaching. See Caustad, Great Awakening in New England, pp. 80-101; Goen, "Editor's Introduction," pp. 80-83; and Miller, Jonathan Edwards, pp. 165-195.

⁹¹Some Thoughts, p. 297; see also Affections, p. 96, and Will, pp. 141-148.

consists in a unified rational-emotive process which begins with conscious and unconscious feeling and culminates in goal-directed, volitional activity. Conversion, reduced to lowest terms, is the fundamental reorientation of the affections; God and godliness is loved and relished above all else. A direct, immutable, and instantaneous causative sequence begins, therefore, with the infusion of the Divine Light in conversion (Figure 27). The convert loves Divine things, conceptualizes the world differently, and finally he thinks and behaves in a saintly fashion. Most assuredly, for Edwards, there must be visible evidence of conversion which can be traced directly to the invisible essence of the process: the reorientation of the affections, the apprehension of God with a "sense of the heart." Nervous New Englanders could breath a temporary sigh of relief.

What is the nature of this evidence, then, which allows one to label certain affections as holy and others as spurious? Edwards elaborated the distinctions between the affections twice, once during the heat of the Awakening in the Distinguishing Marks (1741), and again shortly after the spiritual furor had subsided in the Religious Affections (1746).⁹² A summary of the reliable evidence of conversion

⁹²Of course, many of Edwards' other treatises and sermons are concerned with this problem; cf. Grace and True Grace Distinguished. The Distinguishing Marks and Religious Affections, however, are devoted almost entirely to the systematic distinction between the affections.

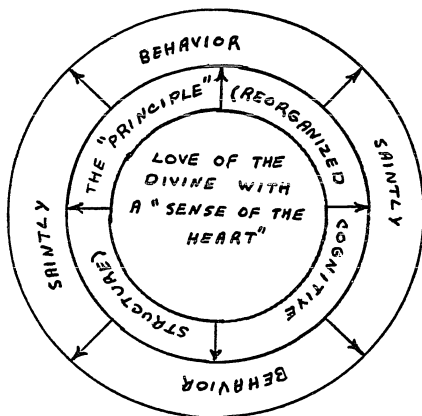


Figure 17. Edwards' conception of the psychological sequence in conversion.

TABLE 4

RELIABLE MARKS AND SIGNS OF A
VALID CONVERSION⁹³

"Distinguishing Marks"

1. Raised esteem of Jesus Christ as Son of God and Saviour of the world.
2. Turning away from corruptions and lusts to the righteousness of God.
3. Increased regard for Holy Scripture.
4. Minds are established in the objective truths of revealed religion.
5. Genuine love for God and man.

"Positive Signs"

1. Influences and operations on the heart are spiritual, supernatural, and divine.
2. The Divine is loved for itself.
3. An appreciation of the moral excellency of divine things.
4. The mind is enlightened, rightly and spiritually to understand divine things.
5. A certainty of divine things.
6. A sense of evangelical humiliation.

⁹³ All the "distinguishing marks" and "negative instances" in Tables 1 & 2 are adapted from Goen, "Editor's Introduction," p. 54. All the "positive signs" and "negative signs" in these tables are taken directly from the Affections.

7. A change of nature.
8. Meekness and mercy.
9. A christian tenderness of spirit.
10. Beautiful symmetry and proportion.
11. The higher the affections are raised, the greater the longing that they be increased.
12. The exercise and fruit of christian practice.

TABLE 5
UNRELIABLE MARKS AND SIGNS OF
A VALID CONVERSION

"Negative Instances"

1. The work is carried on in an unusual or extraordinary way.
2. Strong effects are produced in the body.
3. A "great deal of noise about religion" is occasioned.
4. Lively impressions are induced on people's imaginations.
5. The work is promoted too much by the influence of example.
6. Imprudent and irregular conduct.
7. Errors in judgment and "delusions of Satan."
8. Professed converts falling into scandal.
9. Preachers insist too much on God's wrath.

"Negative Signs"

1. High affections.
2. Bodily effects.
3. "Talking of the things of Religion."
4. Persons did not contrive affections.
5. "Texts of scripture are remarkably brought to mind."
6. An appearance of love in the affections.
7. Many kinds of affections.
8. The affectionate joy seems to follow a certain order.

9. Persons are much engaged in worship and church duties.
10. Much praising and glorifying God.
11. Confidence in the validity of the conversion experience.
12. Godly, charitable behavior.

is presented in Table 4, while the potentially spurious evidence is found in Table 5.⁹⁴

Most of these "signs," "marks," and "instances" are derived from scripture and from orthodox Puritan commentary. Theologically, Edwards' position on conversion evidence is quite unexceptional. Psychologically, however, his discussion of the indices of a valid conversion is most peculiar. As tools for evaluating the truth or falsity of conversion, the lists are utterly worthless. In the first place, the distinguishing marks and positive signs are so vague and subjective that they are innocuous. How high, for instance, does esteem of Jesus Christ have to be raised (first distinguishing mark)? How tender is a Christian tenderness of spirit (ninth positive sign)? Even if it is granted that all the reliable marks and signs are true, that is they occur if and only if they are accompanied by a valid conversion, their importance is still restricted to theological disputation and Biblical interpretation. There is virtually no way for an aspiring convert to measure the extent to which his experience approximates a valid conversion because no rules or criteria are provided. Edwards has, in other words, provided what today might be called an untestable theory. There is no common

⁹⁴ Edwards seems to have derived these lists chiefly from I John 4:1 and from Thomas Shepard's The Parable of the Ten Virgins (London, 1660). For an analysis of the marks, see Goen, "Editor's Introduction," pp. 52-56. On the signs in the Affections see Smith, "Editor's Introduction," pp. 24-43, and pp. 53-57 for a discussion of Shepard's influence on Edwards. On Shepard and the signs in the Parable, consult Michael McGiffert, God's Plot: The Paradoxes of Puritan Piety (Amherst, Mass., 1972), pp. 3-32.

ground where theoretical criteria and data can meet. In science, of course, untestable theories are inadmissible, but then Edwards was no scientist. An eighteenth-century Calvinist did not test the claims of his God. The ultimate result of arid theorizing was much the same for Edwards, however, as it is for the modern scientist. Scientists tend to ignore theories which have no behavioral referents. Likewise, a thoughtful, aspiring convert would be forced to turn elsewhere for a more useful, if less eloquent and well-reasoned, method for evaluating his experience. In the absence of testable criteria he would probably ask his minister or perhaps even his friends for a simple "yes" or "no."⁹⁵

A second difficulty with Edwards' marks and signs lay in the confounding of reliable and unreliable evidence. It might well be the case that the negative instances and signs could act as imperfect vehicles for the expression of the positive marks and signs. If a person experiences an increased regard for Holy Scripture (third distinguishing mark), for example, he is very likely to make a great deal of noise about religion (third negative instance). And certainly the exercise and fruit of Christian practice (twelfth positive sign) includes Godly, charitable behavior (twelfth negative sign). Without question, Edwards had demonstrated that "there are undoubtedly sufficient marks given to guide the

⁹⁵This is precisely the approach taken by many of Thomas Shepard's parishioners; see George Selement, ed., The Confessions of Thomas Shepard

church of God in this great affair of judging of spirits."⁹⁶ The "church of God," however, is an abstraction which is spared paralyzing anxiety concerning its immortal soul. For the worried constituents of that church, Edwards' categories did little to assist them in their evaluation of the validity of their conversions. He had demonstrated that holy affections can, in theory, be distinguished from polluting artifact. Unfortunately, Edwards did not provide instructions for accomplishing this delicate distillation in practice.

His hands were tied, as he would have it, by the Devil. The Evil One played a vital role in Edwardsean psychology, for it was he who effectively frustrated any attempt to successfully evaluate the validity of a conversion.⁹⁷ That "he can't imitate divine operations in their nature" was small consolation.⁹⁸ All other aspects of conversion, those which are susceptible to introspective analysis and observation, can be flawlessly reproduced by the Evil One. "First," Edwards pointed out, ". . . the devil can counterfeit all the saving operations and graces of the Spirit of God . . . those effects of God's Spirit which are special, divine and sanctifying."⁹⁹ Like God himself, the devil can infiltrate a person,

⁹⁶Marks, p. 228.

⁹⁷After his fall from heaven, the devil was alleged to have retained most of his former powers because, as Edwards put it, "sin destroys spiritual principles but not the natural faculties." (True Grace Distinguished, p. 237).

⁹⁸Affections, p. 159; Edward's italics.

⁹⁹Ibid., p. 158.

"possess" him, and produce any or all of the conversion effects that also follow the infusion of the Divine light. "Secondly," admitted Edwards, ". . . if Satan can imitate the things themselves, he may easily put them one after another, in such a certain order."¹⁰⁰ Progression through the conversion sequence, then, from need to seeking to despair to apparent discovery is no guarantee of a valid conversion. The devil can imitate the exact order as well as all the effects of a valid conversion. "Thirdly," Edwards concludes, "we have no certain rule to determine how far God's own spirit may go in those operations and convictions which in themselves are not spiritual and saving."¹⁰¹ The wheat and the chaff, alas, are inextricably mixed; the distinguishing marks and positive signs must be negated in order that the devil be paid his due.

Not all of Edwards' ministerial and theological colleagues were so pessimistic. For radical enthusiasts like Davenport, the overflow of emotion is evidence enough that the Lord is at work. To rationalists like Chauncy, conversion is a much more reasonable enterprise, something like passing a university examination.¹⁰² Edwards' peculiarly generous

¹⁰⁰ Ibid., p. 159; see also Edwards' most elaborate exposition of the devil's prowess in True Grace Distinguished.

¹⁰¹ Affections, pp. 159-160; see also Some Thoughts, pp. 458-459, and True Grace Distinguished, pp. 323-254.

¹⁰² In an often-quoted passage Chauncy remarked, "an enlightened mind and not raised affections ought always to be the guide of those who call themselves men; and this in the affairs of religion as well as others things" (Seasonable

respect for the ability of the devil to camouflage successfully the nature of religious experience is rooted in his transsummative doctrine and in his conception of the cognitive principle contained in the divine light. In a true conversion, he maintained, God's divine light illuminates every corner of the soul; the convert cannot doubt its divine origin.

When there is an actual and lively discovery of this beauty and excellency, it will not allow of any such thought as that it is the fruit of man's invention. This is a kind of intuitive and immediate evidence. They believe the doctrine of God's word to be divine, because they see a divine, and transcendent, and most evidently distinguishing glory in them; such a glory as, if clearly seen, does not leave room to doubt of their being of God, and not of men.¹⁰³

Edwards is saying here that the truth of the light must be inferred immediately and be intuitively obvious--that is the test of its validity. The implication in this remarkable contention is that if the inference is immediate, and the convert concludes that the divine light principle which is fused with the mind is true, then no further examination is necessary.¹⁰⁴ The decision rules contained in the Distinguishing

Thoughts, p. 327). It was Perry Miller, I believe, who first clearly demonstrated that Chauncy's psychological viewpoint, as shown in the above quote, does not refute Edwards, as it was meant to. Chauncy was an orthodox "faculty psychologist" while Edwards was not. It has since become fashionable to deride Chauncy for his inability to comprehend Edwards' true meaning; cf. Miller, Jonathan Edwards, pp. 175-185, Gaustad, Great Awakening in New England, chapt. 6, Goen, "Editor's Introduction," pp. 80-83. Historians might have spent their time better getting their own house in order. Who among us yet really understands what Edwards was trying to say?

¹⁰³ "Divine Light," p. 178.

¹⁰⁴ Theologically, this position is quite ordinary; it corresponds to one of the five tenets of Calvinism contained

Marks and the Religious Affections are therefore superfluous.

Recall that, according to Edwards, one can never be an objective, "rational" observer of his own experience or the behavior of another. This which appears beautiful or delightful must also, and immediately, be perceived as true. A "sense of the heart" implies that reason and the emotions are one. Thus, if the divine light is beheld in the way Edwards suggests, with a transsumative "sense of the heart," than no amount of negative feedback afterward is likely to convince the hopeful convert that his experience was invalid. He knows he is saved. Furthermore, since we have also seen the devil can imitate every phase of the conversion sequence except the divine principle of cognitive reorganization, any rules for evaluating feedback from a conversion are useless for three reasons: (a) the data to which they apply may be unaccountably spurious; (b) the event to which they apply is strictly cognitive and thus too private to be evaluated by an outsider; and (c) the event to which they apply is apprehended in such a way as to make it impervious to objective evaluation even by the person who has experienced it. If a person is not convinced totally and immediately that his experience was a valid conversion then, logically, he has not been converted. But even extreme confidence is insufficient. Edwards' eleventh negative sign is unmistakably clear on this.

in the Westminster Confession, namely irresistible grace. Psychologically, however, this doctrine has a number of remarkable and seemingly unarguable consequences.

'Tis no sign that affections are right, or that they are wrong, that they make persons that have them, exceedingly confident that what they experience is divine, and that they are in a good estate.¹⁰⁵

The devil is quite capable of inducing a haughty confidence even in the basest hypocrite.

Edwards faced a stark reality that was the product of his own ingenuity. He had conceived of man as a complex, dynamic being who is always motivated by an array of mostly-unconscious emotions. In order to transform the whole man, then, a true conversion must consist in an absolutely inward, cognitive, reorientation that is not subject to direct evaluation. The existence of the new, divinely-oriented cognitive structure must always be inferred from signs which, unfortunately, the devil can also produce. "The devil has special advantage," Edwards admitted, " . . . with respect to the inward experiences of christians themselves; and . . . with respect to the external effects of experiences."¹⁰⁶ In his weaker moments he must have complained to his God that it was a grossly unfair advantage, unfair to hopeful converts and unfair to well-meaning ministers.

As an individual initiates his sequential, proactive evaluation of his conversion experience, he is confronted

in the Westminster Confession, namely irresistible grace. Psychologically, however, this doctrine has a number of remarkable and seemingly unarguable consequences.

¹⁰⁵ Affections, p. 167; see also True Grace Distinquished, p. 245.

¹⁰⁶ Some Thoughts, p. 458.

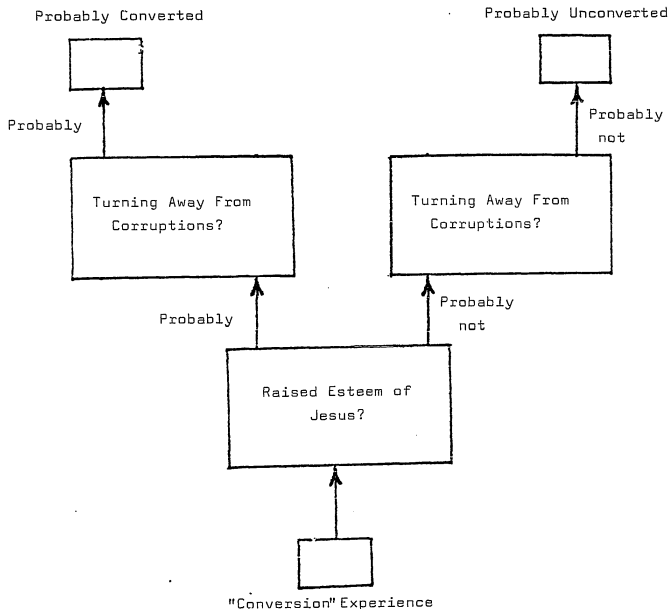


Figure 18. The Edwardsean "Decision" tree: The evaluation of conversion validity using the first two "distinguishing marks."

with an impossible task (Figure 18). At every choice point there is both a "yes" and a "no." This or that sign which he has observed in his own experience may be a reliable index of a valid conversion, and then again, it may not. "It is like giving a man rules," said Edwards, "how to distinguish visible objects in the dark."¹⁰⁷ It is impossible to reach a conclusion concerning any apparent conversion, based strictly on the "evidence."

Edwards faced squarely the principal problem of all cognitive psychologists: the mind, the great organizer of experience and action, is inscrutable. Contemporary cognitive theorists, like Edwards, are necessarily interested in behavior, and with Edwards they believe that behavior is only a very rough and unreliable indicator of human functioning. Generative grammarians, for instance, distinguish between competence and performance. People are said to be far more competent in a language than their performance can ever indicate. We can, in theory, construct an infinite number of grammatical sentences, the vast majority of which we have neither heard nor spoken before. This remarkable and uniquely human ability is usually attributed to transformational rules which are embedded in "deep structures" of the mind.¹⁰⁸

¹⁰⁷Affections, p. 195.

¹⁰⁸See Noam Chomsky, Aspects of the Theory of Syntax (Cambridge, Mass, 1965) and his much more readable Language and Mind, rev. ed. (New York, 1972). The postulation of airy constructs like "deep structures" irks behaviorists like B. F. Skinner. His behavioristic account of language may be

If Jonathan Edwards had been a contemporary cognitive psychologist, he would probably have attached statistical probabilities to his distinguishing marks and positive signs. "If all behavioral and experiential indices are considered together," he might jargonize, "than the probability of an individual exhibiting all these traits without the presence of the divine light is less than one in a hundred." The devil would become the capricious chance factor, the intervening, uncontrolled, but sometimes effective causative agent. In fact, Edwards was trying to accomplish a similar result. In spite of his conviction that true religion is an inner phenomenon, he knew about Anne Hutchinson and antinomianism, and about the Quaker "inner light."¹⁰⁹ He knew how chaotic those controversies were, with everyone deciding for themselves whether they had been visited or not. How he must have wished to discover some way of discriminating true religion from false which has some specifiable reliability. His own set of valid criteria could not accomplish this because his ultimate dependent variable (entrance into heaven) was as inaccessible as his independent variable (presence or absence of the divine light). He could observe neither cause nor effect.

found in Verbal Behavior (New York, 1958). See also Chomsky's now classic, vituperative rebuttle to Skinner in Language, 1959, 35, 26-58.

¹⁰⁹ On the "enthusiast" challenges to Puritan orthodoxy in the seventeenth century, see Emery Battis, Saints and Sectaries: Anne Hutchinson and the Antinomian Controversy in the Massachusetts Bay Colony (Chapel Hill, N.C., 1962), and Perry Miller, Orthodoxy in Massachusetts (Cambridge, Mass., 1933).

Edwards needed to know the unknowable. The manner in which he faced this predicament, over a frenzied period where the need became increasingly acute, is a case study of the interaction between an abstract psychological theory and social upheaval. In 1734, before the Great Awakening got into full swing, Edwards delivered and published his brilliant sermon on "The Divine and Supernatural Light." In it he announced that he would "show what this divine light is."¹¹⁰ This is clearly a misstatement of purpose; Edwards, in fact, attempted to examine the effects of the divine light. These effects, he noted in 1734, are purely cognitive.

. . . he unites himself with the mind of a saint, takes him for his temple, actuates and influences him as a new supernatural principle of life and action The Holy Spirit operates in the minds of the godly, by uniting himself to them, and living in them, and exerting his own nature in the exercise of the faculties.¹¹¹

It was enough, at this point, to elaborate the principle cognitive effects of conversion: the acquisition of "a sense of the loveliness and beauty of that holiness and grace."¹¹² Although this "sense" would undoubtedly be reflected in "action," as Edwards called it, all that need be said about it is that it is "godly."

Edwards, and before him his grandfather Solomon Stoddard, had long urged that emotionalism was not an

¹¹⁰"Divine Light," p. 273.

¹¹¹Ibid., p. 174.

¹¹²Ibid., p. 177; Edwards' italics.

undesirable artifact in conversion.¹¹³ The sudden and complete reorientation of a person's emotional system toward love of an awesome God is a shattering experience which might easily be accompanied by fainting, shrieking, and sweating. By 1741, however, what had long been the rule in Northampton had spread and was engulfing all the American Colonies in turmoil. Davenport was laying siege to New England and George Whitefield was preaching to enthusiastic thousands from Maine to Georgia.¹¹⁴ Many envisioned the entire British empire in America disintegrating in the spiritual smoke of burning religionists. It was in part to allay these fears that Edwards, the acknowledged leader of the new-light supporters of the Awakening, produced the Distinguishing Marks. It is a curious document, exceedingly confident in the beginning, but ending in apparent contradiction and confusion. On the second page he stated his goal.

My design therefore at this time is to shew what are the true, certain, and distinguishing evidences of a work of the Spirit of God, by which we may proceed safely in judging of any operation we find in ourselves or see in others.¹¹⁵

Yet in his conclusion to this treatise, after carefully presenting the distinguishing marks and negative instances, Edwards implicitly acknowledged his impossible dilemma. In

¹¹³See this chapter, footnote 87.

¹¹⁴The career of Whitefield is traced in Joseph Tracy's classic, The Great Awakening, and by Whitefield himself in Whitefield's Journals (London, 1960).

¹¹⁵Marks, p. 227.

order to achieve his stated goal, he would have to either embrace an alternative system of psychology and conception of conversion or, alternatively, give false assurances to hopeful converts. He admitted, finally, that "we must allow the scriptures to stand good, that speak of everything in the saint, that belongs to the spiritual and divine life, as hidden."¹¹⁶ Though he adroitly chose not to emphasize the point, he saw clearly that there are no marks of God's grace which ordinary mortals can distinguish.

As leader of the supporters of the Awakening, Edwards was in a difficult situation. He would do nothing to directly dampen the fires of the Awakening. His intuition told him that the "uncommon concern and engagedness of mind about the things of religion is, undoubtedly, in the general, from the Spirit of God."¹¹⁷ To the enemies of the Awakening, Edwards, never any diplomat, was disarmingly blunt. He remarked matter of factly, as though it could be proven, that "Christ is come down from heaven into this land," and he reminded them of the Bible's clear warning that they who do not aid in the work of the Spirit "should take heed that they ben't guilty of the unpardonable sin against the Holy Ghost."¹¹⁸ In other words, opponents of the Awakening should count

¹¹⁶ Ibid., p. 285.

¹¹⁷ Ibid., p. 260.

¹¹⁸ Ibid., p. 270 and p. 275.

themselves among the unfortunate majority of humanity who are destined for the eternal torments of hell. On the other hand, he admonished preachers who were supporters of the Awakening to practice "humility and self-diffidence, and an entire dependence on our Lord Jesus Christ."¹¹⁹ This is the most important message in the Distinguishing Marks, though it appears as but a whisper next to the marks themselves.

"Trust my psychological analysis of the operation of the divine light," he might have said, "not in the reliability of the distinguishing marks." Yet he did not actually say anything of the kind. The Lord should be given benefit of the doubt. He provided a number of distinguishing marks; all should pray earnestly that He grant His earthly disciples His power of discernment.

One of the basic postulates of Edwardsean psychology is that people selectively attend to that which please them and avoid that which appears painful. Edwards undoubtedly knew that hopeful converts and New Light ministers would focus their attention on the marks at the expense of his muted pleas for humility and moderation. In 1741, it seemed as if a new order might be at hand. Edwards himself had seen members of the Enfield, Connecticut congregation shriek and faint upon hearing one of his sermons, delivered in his usual calm, deliberate manner.¹²⁰ And when Whitefield addressed his

¹¹⁹ Ibid., p. 277.

¹²⁰ Rev. Eleazar Wheelock reported that "there was such a breathing of distress, and weeping, that the preacher

Northampton congregation, it is recorded that even Edwards wept uncontrollably from beginning to end.¹²¹ The devil seemed to be in retreat. In his more sober moments, however, Edwards quietly offered the devil his profound respect. The preservation of his psychological system in the Distinguishing Marks, the maintenance of conversion as an absolutely-cognitive event, represents nothing less than a courageous and grudging tribute to the power of the Evil One.

By 1746, the Great Awakening was over. The energy was spent, the millennium had eluded New England once again, and bitter controversy prevailed. God seemed to have forsaken his flock when needed him most. Robert Lowell has transformed Edwards' bitter disappointment "after the surprising conversions" into verse.

. . . At Jehovah's nod
Satan seemed more let loose amongst us: God
Abandoned us to Satan, and he pressed
Us hard, until we thought we could not rest
Till we had done with life. Content was gone.
All the good work was quashed. We were undone.
The breath of God had carried out a planned
And sensible withdrawal from this land.¹²²

was obliged to speak to the people and desire silence, that he might be heard." (Benjamin Trumbull, A Complete History of Connecticut, Civil and Ecclesiastical, 1630-1764. 2 Vols. (New Haven, Conn., 1818), II, p. 145.

¹²¹ Whitefield's Journal's, p. 477.

¹²² "After the Surprising Conversions" originally appeared in Lord Weary's Castle (New York, 1944), and may also be found in David Levin, ed., Jonathan Edwards: A Profile (New York, 1969), pp. 252-253. For overviews of the psychological, political, ecclesiastical, and theological controversy which accompanied the Awakening, see Heimer, Religion, and Goen, Revivalism and Separatism in New England, 1740-1800, 2nd ed. (Hamden, Conn.; 1969).

From all the disappointment and charges and countercharges of enthusiasm, chicanery, and hard-heartedness, Edwards extracted one implication of overriding significance: men are capable of distinguishing between charlatans and saints. There can be no final exit from the conversion loop. He presented the positive signs in the Religious Affections, therefore, not so much for their practical value, but rather to demonstrate that his psychological views are rooted in Holy Scripture.

. . . I am far from undertaking to give such signs of gracious affections, as shall be sufficient to enable any certainly to distinguish true affection from false in others; or to determine positively which of their neighbors are true professors, and which are hypocrites.¹²³

Furthermore,

No such signs are to be expected, that shall be sufficient to enable those saints certainly to discern their own good estate.¹²⁴

Those in search of a manual which would help them evaluate the validity of their conversion experiences need not have read on. Those who read on to the end of the Affections would find a boldly-stated conclusion which had been only an implicit assumption prior to the Awakening and a surreptitious afterthought in the heat of that remarkable event: sainthood is a purely cognitive phenomenon.

Christian or holy practice is spiritual practice; and this is not the motion of a body, that knows not how, nor when, nor wherefore it moves. . . . To speak of Christian experience and practice, as if they were two things,

¹²³ Affections, p. 193.

¹²⁴ Ibid., p. 193.

properly and entirely distinct, is to make a distinction without consideration or reason. Indeed all Christian experience is not properly called practice; but all Christian practice is properly called experience.¹²⁵

All that is essentially Christian is the reorientation of the mind toward love of the divine.¹²⁶

If the Distinguishing Marks is Edwards' tribute to the power of the devil in a time when God seemed to be roaming the New England countryside, the Religious Affections is his acknowledgement of God's awesomeness in a period of apparent Godlessness. "God," Edwards entitled his first published sermon, "is glorified in man's dependence."¹²⁷ In the Affections Edwards attempted to demonstrate the absolute nature and psychological basis of that dependence. The inscrutable, emotional mind of man is where the battle between the forces of light and darkness takes place. Medieval theology thus becomes rooted in synthetic psychology. Man must depend on God's benevolence not only for grace, but also for the assurance of grace. In Edwards' view, ultimate causes of human behavior can never be known. One hundred fifty-four years after Edwards published his Affections, another American philosopher-psychologist brought this stark view up to date. William James, having glossed over his Calvinist heritage with

¹²⁵ Ibid., pp. 450-451.

¹²⁶ Recall Joseph Haroutunian's claim that Edwards was a "behaviorist" (see above, pp. 63-67). This must now appear as one of the greatest miscarriages of justice in all of American intellectual history.

¹²⁷ For the complete title of the sermon, see this chapter, footnote 24.

a veneer of Darwinian biology and Heraclitean philosophy, scoffed at the new experimental psychologists who promised to reduce the "science of mental life" to a few laws. The inevitable result of this flurry of optimistic activity, he believed, is profound ignorance. Thus he concludes his

Principles:

No more . . . can we believe that the couplings of terms within the mind are simple copies of corresponding couplings impressed upon it by the environment. . . .

Even in the clearest parts of Psychology our insight is insignificant enough. And the more sincerely one seeks to trace . . . the steps by which as a race we may have come by the peculiar mental attributes which we possess, the more clearly one perceives "the slowly gathering twilight close in utter night."¹²⁸

Were Edwards capable of a small bit of sacrilege, it is safe to predict that he would have uttered a hearty "Amen!" to this assessment.

Exit: The Sainly Life

Edwards' inability to distinguish logically between holy and spurious affections did not prevent him from speculating upon the earthly fruits of a valid conversion: the saintly life. In fact, his view of sainthood may be extracted directly from the marks and signs. It would be possible, for example, to condense all the distinguishing marks and positive signs into a composite, abstract Edwardsean saint. This mythological saint would be pure, loving, humble, etc. A detached, completely analytic approach to Edwards' conception of the saintly life would, however, be lifeless and redundant,

¹²⁸Principles, Vol. II, p. 688.

and it would leave the utterly false impression that he regarded sainthood as an unattainable abstraction.¹²⁹ On the contrary, to Edwards, every important aspect of sainthood was embodied in his beloved wife Sarah. She was, as one scholar has remarked, "the supreme example of heartfelt religion experienced as ecstatic transport and lived in sober righteousness."¹³⁰ Edwards wanted to show once and for all that "true religion, in great part, consists in holy affections," and that affectionate piety need not result in ranting enthusiasm but rather in a quiet, serene, saintly life.¹³¹ In 1742, therefore, at the height of what he called the "enthusiastical season," Edwards presented Sarah (anonymously described as "a person") to the world in his treatise, Some Thought Concerning the Revival.¹³² To paraphrase Edwards' description of Sarah's spiritual life is self-defeating. He saw in Sarah the essence of the fruits of conversion, and he described her concisely and with feeling.

Although the selection which follows needs little exegesis, some general points might be noted. First, Sarah

¹²⁹Such a conglomeration would be difficult to accomplish. John E. Smith has pointed out that Edwards never ranked the signs in order of their importance. It is impossible to determine, therefore, which signs, if any, can be omitted and which ones are crucial; see "Editor's Introduction," p. 24.

¹³⁰Goen, "Editor's Introduction," p. 68.

¹³¹Affections, p. 95.

¹³²See Goen, "Editor's Introduction," pp. 65-78 for an analysis of Sarah's narrative and its relationship to Some Thoughts, in which it appears.

is intoxicated with God. While Edwards claimed that Sarah's direct, affectionate communication with God was accomplished "without being in any trance," a contemporary evaluation of Sarah's state of mind during her frequent swoons would almost certainly affirm that she was often in a trance. A second aspect of Sarah's saintliness, one which seems antithetical to the first, is the improvement in her behavior and her increased efficiency. Finally, in spite of her assurance concerning her spiritual condition, she is exceedingly humble.

. . . I have observed or been informed of, the following things have[ing] been united: viz. a very frequent dwelling, for some considerable time together, in such views of the glory of the divine perfections, and Christ's excellencies, that the soul in the meantime has been as it were perfectly overwhelmed, and swallowed up with light and love and a sweet solace, rest and joy of soul, that was altogether unspeakable; and more than once continuing for five or six hours together, without any interruption, in that clear and lively view or sense of the infinite beauty and amiableness of Christ's person, and the heavenly sweetness of his excellent and transcendent love; so that (to use the person's own expressions) (the soul remained in a kind of heavenly Elysium, and did as it were swim in the rays of Christ's love, like a little mote swimming in the beams of the sun, or streams of his light that come in at a window; and the heart was swallowed up in a kind of glow of Christ's love, coming down from Christ's heart in heaven, as a constant stream of sweet light, at the same time the soul all flowing out in love to him; so that there seemed to be a constant flowing and reflowing from heart to heart. The soul dwelt on high, and was lost in God, and seemed almost to leave the body; dwelling in a pure delight that fed and satisfied the soul; enjoying pleasure without the least sting, or any (so far as the judgement and word of a person of discretion may be enjoyed in each single minute of the whole space, which was many hours, was undoubtedly worth more than all the outward comfort and pleasure of the whole life put together; and this without being in any trance, or being at all deprived of the exercise of the bodily senses: and the like heavenly delight and unspeakable joy of soul, enjoyed from time to time, for years

together; though not frequently so long together, to such an height: extraordinary views of divine things, and religious affections, being frequently attended with very great effects on the body, nature often sinking under the weight of divine discoveries, the strength of the body taken away, so as to deprive of all ability to stand or speak; sometimes the hands clinched, and the flesh cold, but senses still remaining . . .¹³³

. . . the thoughts of death and the day of judgement are always exceeding sweet to the soul. This resignation is also attended with a constant resignation of the lives of dearest earthly friends; and sometimes when some of their lives have been imminently threatened, often expressing the sweetness of the liberty of having wholly left the world, and renounced all for God, and having nothing but God, in whom is an infinite fullness.

These things have been attended with a constant sweet peace and calm serenity of soul, without any cloud to interrupt it; a continual rejoicing in all the works of God's hands, the works of nature, and God's daily works of providence, all appearing with a sweet smile upon them; a wonderful access to God by prayer, as it were seeing him, and sensibly immediately conversing with him, as much oftentimes (to use the person's own expressions) as if Christ were here on earth, sitting on a visible throne, to be approached to and converse with; frequent, plain, sensible and immediate answers of prayer; all tears wiped away; all former troubles and sorrows of life forgotten, and all sorrow and sighing fled away, excepting grief for past sins and for remaining corruption, and that Christ is loved no more, and that God is no more honored in the world, and a compassionate grief towards fellow creatures; a daily sensible doing and suffering everything for God for a long time past, eating for God, and working for God, and sleeping for God, and bearing pain and trouble for God, and doing all as the service of love, and so doing it with a continual, uninterrupted cheerfulness, peace and joy. "Oh how good," said the person once, "is it to work for God in the daytime, and at night to lie down under his smiles!" High experiences and religious affections in this person have not been attended with any disposition at all to neglect the necessary business of a secular calling, to spend the time in reading and prayer, and other exercises of devotion; but worldly business has been attended with great alacrity, as part of the service of God: the person declaring that it being done thus, 'tis found to be as good as prayer. These things have been accompanied with an exceeding concern and zeal for moral duties, and that all professors may with them adorn the doctrine of God their Saviour; and

¹³³ Some Thoughts, pp. 331-332.

an uncommon care to perform relative and social duties, and a noted eminence in them; a great inoffensiveness of life and conversation in the sight of others; a great meekness, a gentleness and benevolence of spirit and behavior; and a great alteration in those things that formerly used to be the person's failings; seeming to be much overcome and swallowed up by the late great increase of grace, to the observation of those that are most conversant and most intimately acquainted: in times of the brightest light and highest flights of love and joy, finding no disposition to any opinion of being now perfectly free from sin . . . but exceedingly the contrary: at such times especailly, seeing how loathsome and polluted the soul is, soul and body and every act and word appearing like rottenness and corruption in that pure and holy light of God's glory: not slighting instruction or means of grace any more for having had great discoveries; on the contrary, never more sensible of the need of instruction than now. And one thing more may be added, viz. that these things have been attended with a particular dislike of placing religion much in dress, and spending much zeal about those things that in themselves are matters of indifference, or an affecting to shew humility and devotion by a mean habit, or a demure and melancholy countenance, or anything singular and superstitious.¹³⁴

Almost all of Edwards' writing is didactic. Even in his descriptions of parishioners, in his comments on the tragic autobiography of his son-in-law, Rev. David Brainerd, and in this lively narrative of Sarah's life style, Edwards' primary purpose is always to provide a convincing argument.¹³⁵ The accuracy of his portrayal of Sarah is, therefore, far less important than the point he wished to make.¹³⁶ The point was simply this: the exit from a valid conversion, the saintly

¹³⁴ Ibid., pp. 339-341.

¹³⁵ Cf. Jonathan Edwards, ed., "Reflection on the Preceding Memoirs." In Memoirs of the Rev. David Brainerd (Vol. X of Dwight, ed., Works), pp. 414-452.

¹³⁶ Whitefield, however, confirmed Edwards' evaluation of his wife. So impressed was Whitefield that he asked the Lord to send him a wife like Sarah (see Whitefield's Journals, p. 477).

life, consists in an optimum balance between irrationality and rationality or what generations of Puritan thinkers had called piety and intellect.¹³⁷ Unlike the ornate systems of his scholastic forbears and descendents, Edwards' transsumative doctrine made no absolute distinction between the irrational, or emotional, and the rational. They are only relative terms, aspects of the same unified process. The christian life is, therefore, somewhat like the swing of a well-oiled pendulum in an old grandfather clock. One gathers insight and strength in direct, emotional communication with God and then applies the fruits of his religious experience in his day-to-day activities.¹³⁸ Edwards chose Sarah, she in whom "the affections and high transports are . . . Pure and unmix'd, and so well regulated," to effectively illustrate his point.¹³⁹ The earthly reward associated with a valid conversion, then, is a life of worldly mysticism. The saint,

¹³⁷ See Stow Persons, American Minds (New York, 1958) for a good discussion of this traditional Puritan dilemma.

¹³⁸ This sort of cognitive style implies an easy oscillation between parallel and sequential processing. Neisser believes this is the essence of creativity (Cognitive Psychology, pp. 302-305). Most investigators in the field in creativity agree that the creative person is one who achieves a balance between relaxed playfulness and daydreaming on the one hand, and highly-motivated, goal-directed activity on the other; cf. Rogers, On Becoming a Person; Kris, Psychoanalytic Explorations; Abraham A. Mallow, Toward a Psychology of Being 2nd ed. (New York, 1968); and Cynthia Wild, "creativity and Adaptive Regression," Journal of Personality and Social Psychology, 1965, 2, 161-169. Stripped of its Calvinist theology then, the Edwardsean saintly life is a creative, "self-actualizing" life.

¹³⁹ Some Thoughts, p. 341.

conversion, then, is a life of wordly mysticism. The saint, in the words of a famous mystic, is "in the world, but not of it."¹⁴⁰

Summary: The "Personal Narrative"

To conclude and summarize this chapter, we shall listen to Jonathan Edwards interpret the events surrounding his own conversion. We shall introspect with the thirty-six year old pastor as he reflects on the youthful experience which changed his life. For the "Personal Narrative," Edwards' backward glance into his memory was clearly made through synthetic psychological spectacles.¹⁴¹ The entire account is organized around transsumative and cybernetic principles. At least that is the position taken here. I have used the "Personal Narrative" for the same reason that Edwards described Sarah's life in such detail: to substantiate an argument by making concrete a point which might otherwise remain unconvincingly abstract. The point here is

¹⁴⁰ This is the advice given in the "Nasrudin" stories of George Gurdjieff; cf. Robert Ornstein, The Psychology of Consciousness (San Francisco, Calif., 1972).

¹⁴¹ The so-called "Personal Narrative" of Edwards first appeared in Samuel Hopkins' The Life and Character of the Late Reverend Mr. Jonathan Edwards (Boston, 1765). This biographical classic has recently been reprinted in Levin, Jonathan Edwards: A Profile, pp. 1-86. All references to the "Personal Narrative" are to this edition. For a textual history of the "Personal Narrative," and a comparison of it with similar colonial documents, consult Daniel B. Shea, Spiritual Autobiography in Early America (Princeton, 1968).

that the synthetic principles that I have attributed to Edwards were so deeply embedded in his thinking that he saw his own life in those terms. He turned those common denominators inward onto himself and, not surprisingly, he found that his life also could be reduced to them.

While at college Edwards was much caught up in displays of religion and religious activity.

I used to pray four times a day in secret, and to spend much time in religious talk with other boys; and used to meet with them to pray together. I experienced I know not what kind of delight in religion. My mind was much engaged in it, and had much self-righteous pleasure; and it was my delight to abound in religious duties. . . .

But in process of time, my convictions and affections wore off; and I entirely lost all those affections and delights, and left off secret prayer, at least to any constant performance of it, and returned like a dog to his vomit, and went on in ways of sin.

Indeed, I was at some times very uneasy, especially toward the latter part of the time of my being at college. 'Till it pleas'd God, in my last year at college, at a time when I was in the midst of many uneasy thoughts about the state of my soul, to seize me with a pleurisy; in which he brought me nigh to the grave, and shook me over the pit of hell.¹⁴²

. . . I had great and violent inward struggles. . . .¹⁴³

In vivid language, Edwards here describes the origin and development of a spiritual need. He perceived a vast incongruity between his actual "estate" and the converted condition which he once thought he had but now earnestly desired.

It was the conviction of his own worthlessness that led him to act decisively.

¹⁴² "Personal Narrative," p. 24.

¹⁴³ Ibid., p. 25.

. . . I was brought wholly to break off all former wicked ways, and all ways of known outward sin . . . I made seeking my salvation the main business of my life.¹⁴⁴

Edwards' "inward struggles" reached a conclusion of sorts one day as he was reading scriptures.

As I read the words, there came into my soul, and was as it were diffused thro' it, a sense of the glory of the Divine Being, a new sense, quite different from any thing I ever experienced before.¹⁴⁵

This diffusion, "a wonderful alteration in my mind," refers, of course, to the reorientation of the affections accomplished by the vital indwelling principle.¹⁴⁶ He had, for the first time, discovered God and apprehended him with a "sense of the heart," with spiritual understanding and holy affections. "I had then and I have often since," Edwards remarked, "not only a conviction, but a delightful conviction."¹⁴⁷ Whereas before he had only what he usually referred to as a "notional" understanding of the Divine Being and Divine Love, he now had "an inward sweet sense of these things."¹⁴⁸ He had discovered the divine psychological principle. This principle, like all significant insights, is grasped with a transsummative sense of the heart; it lodges not merely in the brain but also, to use Housman's metaphor, in the pit of the stomach. You can feel it, and as in any important creative discovery, the

¹⁴⁴ Ibid., p. 25.

¹⁴⁵ Ibid., p. 26.

¹⁴⁶ Ibid., p. 25.

¹⁴⁷ Ibid., p. 26; Edwards' italics.

¹⁴⁸ Ibid., p. 26.

feelings may run amok. If the conversion is a true one, however, raving and ranting are holy affections--a function of being overwhelmed by a delightful sense of divine love.

Edwards tells us virtually nothing of the conditions surrounding that first remembered insight except that it occurred while reading the Bible. It is quite likely, however, that it happened within the context of the habits of study, prayer, and meditation that he maintained throughout his adult life. Samuel Hopkins, Edwards' student, friend, and first biographer, tells us something of his study habits.

He commonly spent thirteen hours a day in his study. His most usual diversion in summer was riding on horseback and walking. He would commonly, unless diverted by company, ride two or three miles after dinner to some lonely grove, where he would dismount and walk a while. At which times he generally carried his pen and ink with him, to note any thought that should be suggested, which he chose to retain and pursue, as what promised some light on any important subject.¹⁴⁹

The solitary walks in the woods, utterly alone and after a meal, must have helped him to clear his mind of distractions, to relax, and to wrestle with the theological problems which consumed him. This method of obtaining insights which might shed "light on any important subject" must have been very successful. One of the famous legends surrounding Edwards has him returning from his trips into the woods, his coat covered with little notes which he had pinned to it.¹⁵⁰ Like

¹⁴⁹Life and Character, p. 40

¹⁵⁰Cf. Robert Lowell's poem, "Jonathan Edwards in Western Massachusetts," In Levin, ed., Jonathan Edwards: A Profile, pp. 253-256.

the poet Housman, Edwards worked long and hard to solve problems that interested him, but resorted to reactive walking and waiting for insights that failed to come in the study.

Edwards also used his forest excursions for the more serious business of caring for his soul and conversing with God.

Once, as I rid out into the woods for my health, Anno 1737; and having lit from my horse in a retired place, as my manner commonly has been, to walk for divine contemplation and prayer; I had a view, that for me was extraordinary, of the Glory of the Son of God . . . This grace, that appear's to me so calm and sweet, appear'd great above the heavens.¹⁵¹

Solitary walking, therefore, appears to have been associated with spiritual discoveries and insights as well as mundane ones. Edwards' "first conversion," as he called it, may well have occurred in a solitary, wooded setting. Whether it actually did or not is not crucial. The important point is that Edwards' narrative of his own life, combined with Hopkin's description of his master's habits, confirm a basic Edwardsean principle. Man must plan to seek God, Edwards often contended, but he must eventually forsake his arrogant proactive attitude in order to passively accept the gracious discoveries in conversion.

Edwards' conversion experience altered his cognitive perceptual apparatus; he began to view all things differently than he ever had before.

After this my sense of divine things gradually increased, and became more and more lively, and had more

¹⁵¹ "Personal Narrative," pp. 35-36.

of that inward sweetness. The appearance of everything was altered; there seemed to be, as it were, a calm, sweet cast, or appearance of divine glory in almost everything . . . in the sun, moon, and stars; in the clouds, and blue sky; in the grass, flowers, trees; in the water, and all nature; which used greatly to fix my mind.¹⁵²

This is clearly an insight of epic proportions. "All nature," which formerly perplexed and intrigued the young Edwards, was now seen in a new, harmonious, perspective.¹⁵³

As proof of the validity of his conversion, Edwards offered a bit of his altered behavior which seemed to be an obvious function of his cognitive reorganization.

I used to be a person uncommonly terrified with the thunder: and it used to strike me with terror, when I saw a thunder-storm rising. But now, on the contrary, it rejoiced me. I felt God at the first appearance of a thunderstorm.¹⁵⁴

Edwards believed that, following his conversion experience, he perceived nature more in the manner of God himself. He "felt God" in thunderstorms rather than merely engaging in detached discourse on God's awesome power. He felt it and his reaction was, uncontrollably, "to sing or chant forth my meditations; to speak my thoughts in soliloquies, and speak with a singing voice."¹⁵⁵ He could at last state, "I felt then a great satisfaction as to my good estate" because, as he often argued, no man can argue with his affections,

¹⁵² Ibid., p. 27.

¹⁵³ In his earliest known writings Edwards was fascinated by nature; cf. "Of Insects." In Dwight, ed., Works, Vol. I, pp. 23-28.

¹⁵⁴ "Personal Narrative," pp. 35-36.

¹⁵⁵ Ibid., p. 28.

regardless of their origin.¹⁵⁶ The main business of his life could not turn from seeking his own salvation to helping others to seek theirs. The plan which had structured his behavior for so long could now be discarded.

The "Personal Narrative" does not, as I stated earlier, constitute "objective" evidence for Edwards' synthetic theory. It was written after his psychological views were mature, and there is simply no way to determine the extent to which the memory of his youthful conversion is distorted by the rigid categories of maturity. It does provide, however, the most concrete, vivid, and readable example of what Edwards labored most of his adult life to say. It is his most personal attempt to convey his synthetic view of man and man's relationship to God's universe.

¹⁵⁶Ibid., p. 28.

CHAPTER VI

FROM JONATHAN EDWARDS TO WILLIAM JAMES:
A SKETCH OF A PSYCHOLOGICAL JOURNEY

The purpose of this essay, as stated in the first chapter, is to provide an "oasis of coherence" around the psychological theory of Jonathan Edwards. The achievement of this goal is contingent upon the fulfillment of two separate but related tasks: an explanation of what Edwards said and meant and the insertion of Edwards' thought into a historical scheme of psychology that can accommodate him. At best, my "oasis" must remain only half coherent because this study is almost totally restricted to the decoding of Edwards' psychology. Discussion of the "synthetic tradition" in the history of psychology has been concerned only with demonstrating that the transsummative and proactive-reactive themes have somehow persisted for a long while. In this final chapter, however, I would like to offer some suggestions concerning the development of American psychology between Edwards and James as a way of providing a thread of continuity between the "nebulous colonial days," as Roback referred to them, and the modern period in American psychology.

In keeping with the "experimental" nature of this study, alluded to in chapter one, the current chapter may be said to contain "suggestions for future research." For this

study of Edwards is only a bare beginning, although I hope it demonstrates the utility of applying a contemporary model of synthetic psychology to Edwards. We shall now examine the fate of Edwards' psychology, chiefly the disintegration of his transsummative doctrine, and in so doing suggest that the history of American psychology before William James can be a vital topic when viewed through the synthetic model.

The Decline and Fall of Edwards'

Transsummative Doctrine

It its day, the Edwardsean transsummative doctrine was both too sophisticated and too threatening to attract many devotees. It simply did not make sense to deny the efficacy and freedom of willing. Furthermore, the notion of a totally unified rational-emotive cognitive process could not be assimilated by Puritan thinkers who, in good scholastic fashion, were proud of their "reason" and suspicious of their "affections." Whatever influence Edwards had on psychological thought in America before James, therefore, largely concerned the notion of will: its identity and its freedom. Many of Edwards' contemporaries gazed in scholastic stupefaction and/or Arminian disbelief at the implications of Edwards' position on the will. We have seen that if a man is restricted by what Edwards called "natural necessity" he is not free. A man is not free to leap over a tall tree because certain natural restrictions prohibit it. But what of the situation in which nature does not seem to prohibit the execu-

tion of an act; cannot one choose between alternatives? Edwards replied that, indeed, choices are made, but those choices are themselves determined by "moral necessity."¹ Though a man may consciously choose to act in a given manner, that choice is a function of man's universal adherence to an underlying hedonistic principle. Men are constructed such that they must choose that which they perceive to be the most pleasureable or least painful. That perception, in turn, is the result of the unified rational-emotive process of cognition. What appears to consciousness to be willful volition is what modern psychologists might call a pre-determined response to a perceived stimulus. The infusion of grace in the conversion experience thus becomes a reorientation of the affectionate component of cognition such that human perception coincides with God's perception.

So logical and forceful were the arguments of Edwards that, given his transsumative assumptions concerning a "sense of the heart," his conclusions seemed inevitable to most of his contemporaries. The only apparent way to counter Edwards successfully was to reject those assumptions. This approach was taken by numerous individuals who were outraged by Edwards' assertion that man is, to a large extent, an irrational creature who has no free will.² One of the first to

¹ Will, pp. 156-162.

² Excellent treatments of the early controversy over Edwards' notion of the will may be found in Gaustad, Great Awakening in New England, and Miller, Jonathan Edwards.

adopt this strategy was Charles Chauncy of Boston. He resorted repeatedly to the traditional disjunctive faculty psychology in order to buttress his attempt to reassert that man is a reasonable being, and to establish the belief in an independent and sovereign will.³ Somewhat later, Samuel West proposed a tri-partite division of the faculties into perception, propension, and volition.⁴ Perception and propension (the affections) were both said to be externally determined, while volition was held to be free. For evidence West appealed to consciousness. We are, he stated, "Conscious, that many things take place in consequence of our acting . . ."⁵ West rejected any underlying hedonistic principle to which our choices might be attributed. Thus, by approximately 1800, man was held by certain "liberals" like Chauncy and West to be both primarily rational and free. These conclusions were made possible by the apparently unwitting dismantling of Edwards' transsummative cognitive process into the semi-independent operation of a number of segmented faculties. It was far easier to defend the freedom of the will when it could be assumed, using data from consciousness, that an independent will does indeed exist, and may operate independently of the affections.

³ See especially Chauncy's Seasonable Thoughts.

⁴ Essays on Liberty and Necessity (Boston, 1793).

⁵ Ibid., p. 26.

Any doctrine of free will, irrespective of its psychological underpinning, was bound to be objectionable to an orthodox Calvinist. In fact, West's doctrine of free will appears to have had little direct influence on American theological psychology, which was being written at this time primarily by Calvinists. Though in some respects West was far ahead of his time, he was laboring under the handicap of trying to establish freedom of the will in an era which, due to the pervasive influence of Edwards, the very existence of an independent will was questioned. The alleged superficiality of West's appeal to consciousness was soon enthusiastically exposed by exponents of Calvinist orthodoxy who upheld God's sovereignty and man's absolute dependence upon Him.⁶

The transsummative doctrine remained a problem, however, even after absolute omnipotence was once again attributed to the Calvinists' God. It was especially troubling to Asa Burton, a Yankee parson from Thetford, Vermont.⁷ Burton

⁶Chief among this group were Jonathan Edwards, Jr. and Nathanael Emmons. Contrasting interpretations of their positions and importance may be found in Frank H. Foster, A Genetic History of the New England Theology (Chicago, 1907), and Haroutunian, Piety Versus Moralism. Foster characterizes Edwards, Jr. and Emmons as villains responsible for the demise of the will in American thought, while Haroutunian emphasizes the continuity between their views and those of Edwards. On the whole, Haroutunian offers a much more balanced account.

⁷Burton's one and only, but very important, book is Essays on Some of the First Principles of Metaphysics, Ethicks, and Theology. Intro. by James G. Blight (Albany, N.Y., 1973). (1824) Burton's book, and those by Tappan, Upham, and Taylor referred to below are filled with direct and indirect references to Edwards. In fact, as Herbert Schneider has demonstrated, during the period 1770-1860, American philosophers and theologians spent much of their pro-

appears to have been the first thoroughly deterministic Calvinist to quarrel with Edwards' arrangement of the faculties. Like Chauncy and West, he does not seem to have understood Edwards' peculiar, transsumative use of the term "faculty"; he thought Edwards' two "faculties" should be increased to three. In most respects, however, Burton followed Edwards. With Edwards he maintained the distinction between natural and moral necessity that made Edwards so unpopular among those who were dedicated to demonstrating the existence of a free will. "Were it not for moral necessity," he contended, "liberty would rest on an uncertain foundation. For sometimes we might will as we wish, and sometimes we might not."⁸ The implication is that the strongest motive is that which is perceived as providing the greatest pleasure or least pain. There is not freedom of willing, for Burton, in the sense that there are acts which are not motivated by one's subjective estimate of the potential pleasure or pain that can be derived from them.

Adherence to such a deterministic doctrine did not lead Burton to the fatalistic position that human choices are

professional energy engaging in a "psychological critique of Edwards." This critique, claims Schneider, provided the impetus for the rise of Mental Philosophy in America.

The important outcome for philosophy of this psychological critique of Edwards was not the argument for free will or the defense of orthodoxy, but the founding of a faculty psychology and of an appeal to introspection. This method of approach to "mental philosophy" dominated at least two generations of philosophers, created a new "science," and profoundly affected the course of academic studies in philosophy (History of American Philosophy, 2nd ed., New York, 1962, p. 207). The American psychology which preceded James, then, was in large measure an attempt to deal with the difficult psychology of Edwards.

⁸Ibid., p. 126.

inconsequential. On the contrary, like most Calvinists, he felt compelled to show that man is a "moral agent," i.e., capable of actions which might be considered right or wrong in an absolute sense. In this way man could be held responsible for his acts and justifiably rewarded with everlasting grace or punished with everlasting damnation. In his psychological explanation of moral agency, Burton made his most significant departure from Edwards and his most important contribution to the development of faculty psychology in nineteenth-century America. Edwards had said that there is an intellectual and an affectionate component to every perception, hence to every resulting action. Burton countered by formulating a system of three independently-functioning faculties: understanding, taste, and will. Based upon the introspective evidence of consciousness he proposed that the understanding perceives, the taste feels, and the will acts. Taste, a term which Burton claimed to have originated and which he used interchangeably with "heart" and "affections" was designated as the seat of moral agency. In an important passage he held that

Feeling is the spring of action. If a moral agent were deprived of the faculty of taste, and were as incapable of pleasure and pain as material bodies are, he would be as inert as they.⁹

It is obvious that Burton did not mean to re-establish man's rationality or free will. Man is essentially moved by his "taste." In addition, "the will is only an executive faculty.

⁹Ibid., p. 58.

It is no more than a servant to the heart, to execute its pleasure."¹⁰ Burton retained his Calvinistic determinism and the Edwardsean emphasis upon the affections. His system of independent faculties, unlike those of Chauncy or West, was strictly a function of his dependence upon the date of consciousness.

Burton's notion of tast, however, is wholly contrary to Edwards' transsummative doctrine. Though Edwards spoke of the "faculties" of understanding and will, he was trying to describe a completely unified, indivisible, perceptual-cognitive-motivational process. Burton, on the other hand, no longer speaks of a unified mind. In his system there are three independent faculties, each with its own province within which it is sovereign. In a strictly functional sense, there is little difference between the views of Edwards and Burton. All human acts, they would have agreed, are a function of often unknown affectionate desires. Yet structurally, Burton imposed an organizational scheme on the mind that Edwards never intended. The deterministic, transsummative unity of Edwards was replaced by the equally deterministic but disjunctive "common sense" view of Burton. The change was subtle but significant. Burton's faculty of will was not free in the "liberal" sense, but it had been isolated and given well-specified functions. Burton's relationship to the problem of the will in pre-Jamesian American psychology is represented in Figure 19.

¹⁰Ibid., p. 91.

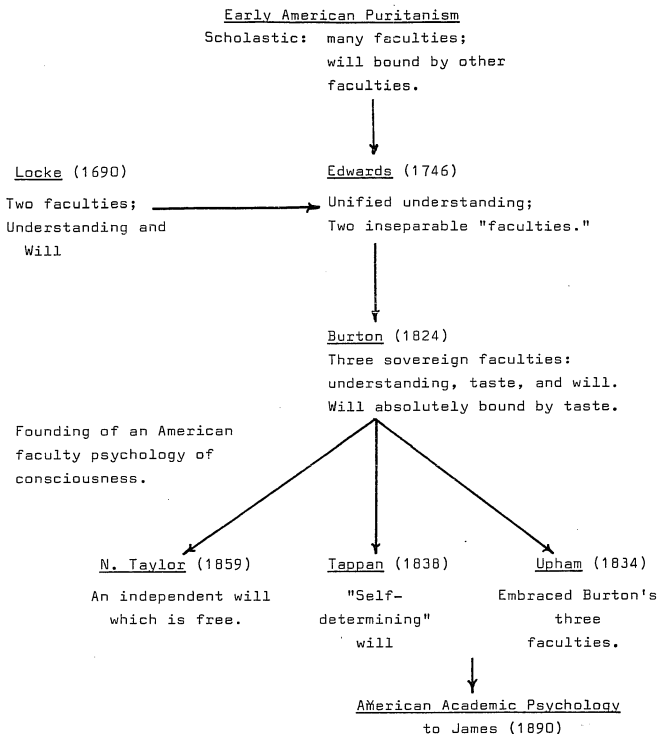


Figure 19. The problem of the will in pre-Jamesian American psychology.

The significance of Burton's elaboration of an acceptably deterministic tri-partite arrangement of the faculties may be illustrated via an analogy with Descartes' separation of mind and body. Descartes' well known dualism held that mind and body are utterly different but interactive entities. LaMettrie, however, then applied Descartes' persuasive description of automata to man, and was left with the first modern vision of man as a thoroughly mechanistic organism. Burton also emphasized the interactive nature of two independent constructs: will and taste. Soon after the appearance of his Essays, however, psychological thinkers influenced by him and by the like-minded Scottish school, cut the transsumative, Edwardsean knot which was said to bind understanding, will and feeling.¹¹ They held that the will of man is free. Without the dichotomy provided by a deterministic Calvinist like Burton, it is unlikely that there would have been a knot to cut, just as LaMettrie's mechanism would have been inconceivable without the earlier believable dualism of Descartes.

Burton may have found independent support for his views in the writings of the early members of the "Scottish School," especially Reid.¹¹ The Scots, with their hard-headed appeals to common sense and consciousness would have

¹¹Burton's Essays, though not published until 1824, appear to have been written much earlier, in the period 1800-1804. Reid's Intellectual Powers (1785) and Active Powers (1788) were known in America by 1800, thus they could have had some impact on Burton.

found an appreciative audience in Burton, whose "common sense" repeatedly told him that the understanding and the will, as he understood Edwards' use of those terms, were not the only faculties. The extent of the Scottish influence on Burton is difficult to assess, since he provides no references and he states in his introduction that the Essays are more a function of "his own powers" than of "the English, Scotch, French, and German authors."¹² This claim must, however be contrasted with his naive realism, appeals to common sense, and his frequent use of the data of consciousness to prove that his particular tri-partite division of the faculties was the correct one. By the time Burton wrote his Essays, Reid had already developed these three characteristics into cornerstones of the emerging Scottish School.

Burton's attempt to integrate Edwardsean psychology with the data provided by his own consciousness appears to have had two important consequences. First, after the "will" had been extricated from the affections and understanding of Edwards, it was a relatively small step for others to dissolve the link of moral necessity which was said to render the will merely an executive faculty. This was accomplished principally by Nathaniel Taylor in whose curious Calvinism the doctrine of the freedom of the will triumphed.¹³ A second result of Burton's efforts was what Schneider has called "the founding

¹²Essays, p. 3.

¹³Lectures on the Moral Government of God, 2 Vols., (New York, 1859).

of a faculty psychology of consciousness."¹⁴ Soon after the publication of Burton's Essays a number of textbooks appeared which expounded the new three-faculty psychology. The most influential of these volumes, by T. C. Upham and H. P. Tappan, reveal the considerable influence of Burton.¹⁵

It is clear that Burton was a transitional figure in pre-Jamesian American psychology. One foot was rooted deeply in the past; psychology for Burton was still of little intrinsic interest. Rather he considered it useful primarily because "he who knows himself correctly may have just conceptions of God."¹⁶ Despite the undeniable theological focus of the Essays, Burton was also breaking new ground. His persistent appeals to common sense and to the data of consciousness was to be reinforced by the Scottish position which was to dominate in America throughout much of the nineteenth century. His tri-partite arrangement of the faculties seemed more reasonable to Calvinists of his era than did the mysterious transsummative unity of Edwards. His system of faculties was adopted and his "will" was declared to be free. Asa Burton helped upon the door, to a greater extent than he ever would have wished, for the development of a view of man's mind which was vastly different from that which preceded him.

¹⁴Herbert Schneider, History, p. 207.

¹⁵T. C. Upham, A Philosophical and Practical Treatise on the Will (Portland, Me., 1834), and H. P. Tappan, A Review of Edwards's "Inquiry into the Freedom of the Will" (New York, 1838).

¹⁶Essays, p. 7.

The overthrow of the transsumative doctrine, initiated by Asa Burton, led to the "age of American scholasticism," to textbooks in mental and moral philosophy which expounded a Sears-catalogue approach to psychology. Faculties were piled on top of faculties until the systems became quite unwieldy and sterile.¹⁷ John Locke was temporarily forgotten and in his place came two new psychological imports, the Scots and Kant, both of which were interpreted as proponents of independent faculties in the mind. The re-emergent dominance of the disjunctive psychology caused the transsumative doctrine to die a temporary death, or at least to go underground. The will (a noun) was certainly not held to be bound by or integrated with the affections. The innocent contention of Burton, a Yankee Calvinist who couldn't understand some subtle Edwardsean distinctions, was transformed into an emancipation proclamation for the will, and a numerically impressive array of other faculties. It was against this "spiritualist" psychology, as James called the disjunctive, faculty approach, that he directed some of his sharpest barbs in the first chapter of the Principles. On the so-called faculty of memory, he remarked:

For why should this absolute god-given Faculty retain so much better the events of yesterday than those of last year, and, best of all, those of an hour ago? Why, again, in old age should its grasp of childhood's events seem firmest? Why should illness and exhaustion enfeeble it? Why should repeating an experience strengthen our recollection of it? Why should drugs, fevers, asphyxia, and

¹⁷A survey of this often, but not always, dreary literature may be found in Schneider, History, pp. 193-216.

excitement resuscitate things long since forgotten? If we content ourselves with merely affirming that the faculty of memory is so peculiarly constituted by nature as to exhibit just these oddities, we seem little the better for having invoked it, for our explanation becomes as complicated as that of the crude facts with which we started. Moreover there is something grotesque and irrational in the supposition that the soul is equipped with elementary powers of such an ingeniously intricate sort. Why should our memory cling more easily to the near than the remote? Why should it lose its grasp of proper sooner than of abstract names? Such peculiarities seem quite fantastic; and might, for aught we can see a priori, be the precise opposites of what they are.¹⁸

The same sort of argument might have been directed at any or all of the faculties. James' analysis was actually an informal epitaph because, as he put it, "the faculty does not exist absolutely, but works under conditions; and the quest of the conditions becomes the psychologist's most interesting task."¹⁹ The experimental lab was to become the arena where those conditions were investigated.

The Proactive-Reactive Doctrine and American Functionalism

A second result of the replacement of Locke by a conglomerate of nativistic theorists was the apparent endorsement and refinement of the proactive-reactive principle beyond that which even Edwards could go. Edwards, of course, drew his data almost exclusively from conversions, and we have seen that he viewed the process as an oscillating give-and-take relationship with the Holy Spirit. In following Augustine

¹⁸Principles, pp. 2-3.

¹⁹Ibid., p. 3.

down the proactive-reactive path, Edwards offered a subtle but significant departure from the traditional Puritan concept of the "reflex" and from Lockean sensationalism. Although gracious discoveries, in Edwards' view, are indeed given to the convert, the result is a radical transformation of an active, constructive mind. B. P. Bowne, a nineteenth-century faculty psychologist in good standing, offered a typical application of the Edwardsean, proactive-reactive principle to all human perception.

. . . by an entirely mysterious world-order, the speaker is enabled to produce a series of signs which are totally unlike [the] thought, but which, by virtue of the same mysterious order, act as a series of incitements upon the hearer, so that he constructs within himself the corresponding mental state. The act of the speaker consists in availing himself of the proper incitements. The act of the hearer is immediately only the reaction of the soul against the incitement . . . All communion between finite minds is of this sort . . . Probably no reflecting person would deny this conclusion, but . . . what is thus true of perception of another's thought is equally true of the perception of the outer world in general . . . Nervous signs are the raw material of all knowledge of the outer world according to the most decided realism. But in order to pass beyond these signs into a knowledge of the outer world, we must posit an interpreter who shall read back these signs into their objective meaning. But that interpreter, again, must implicitly contain the meaning of the universe within itself; and these signs are really but excitations which cause the soul to unfold what is within itself. Inasmuch as by common consent the soul communicates with the outer world only through these signs, and never come nearer to the object than just such signs can bring it, it follows that the principles of interpretation must be in the mind itself, and that the resulting construction is primarily only an expression of the mind's own nature. All reaction is of this sort; it expresses the nature of the reacting agent, and knowledge comes under the same head.²⁰

²⁰Bordon P. Bowne, Metaphysics (New York, 1882), pp. 407-410; quoted in James, Principles, I, pp. 219-220.

This is one aspect of the faculty approach that James thoroughly endorsed.

Some sort of signal must be given by the thing to the mind's brain, or the knowing will not occur--we find as a matter of fact that the mere existence of a thing outside the brain is not a sufficient cause for our knowing it: it must strike the brain in some way, as well as be there, to be known. But the brain being struck, the knowledge is constituted by a new construction that occurs altogether in the mind.²¹

In fact, the proactive-reactive principle was a fundamental assumption of American "Functionalist" psychology, which counted James and Dewey among its founding fathers.²² It was the Functionalists who emphasized that the mind serves an adaptive function: it intervenes between environmental stimulation and resultant behavior. Man receives information from the environment, the functionalists held, but the precise nature of that information is determined, in part, by active goal-oriented selection. The historical analysis of the Functionalist school has suffered from an oddly schizoid approach. It is at once held to be peculiarly American but distinctly European in origin: a pragmatic American application of Hegel's dialectic, Brentano's doctrine of intentionality, and Darwin's theory of evolution.²³ While it cannot

²¹ Principles, I, pp. 218-219.

²² Functionalism, however, was never a tightly-knit school like Structuralism or Gestalt. The most important interpreter of Functionalism is Edna Heidbreder; see Seven Psychologies, pp. 152-253, and "Functionalism," in Mary Henle et al., eds. Historical Conceptions of Psychology (New York, 1973), pp. 276-285.

²³ Heidbreder seems to view Functionalism this way; see Ibid.; see also Boring, History, pp. 508-517 and 550-583.

be denied that Dewey came to psychology via Hegelian philosophy and that James drew heavily upon Brentano and Darwin, it must now be recognized that they were also the inheritors of an American functional tradition which can be traced to Edwards. A discussion of the precise nature of the manner in which the functional, proactive-reactive position may have been transmitted to Dewey, James, and the other "Functionalists" is well beyond the scope of this essay. That important continuity exists between Edwards and the "Functionalists," however, is beyond doubt. For starters, one need only consult the organizational scheme of James' Varieties of Religious Experience, a work in which Jonathan Edwards is quoted more often than any other single author. In chapters 6-13 James takes us on a conversional journey from the perception of evil ("The Sick Soul"), to the depths of despair ("The Divided Self"), to "Conversion," to "Saintliness."²⁴

A schematic of James' view is presented in Figure 20. Except for James' characteristic lack of concern over absolute criteria for the validity of conversion, The Varieties can elicit an eerie de ja vu if one has previously read Edwards' Religious Affections. Indeed, American psychology has been there before, before Darwin, before Wundt, and before the psychological laboratory moved from the church pew to the

²⁴While The Varieties is the only volume in which James refers directly to Edwards, the Principles is also permeated with the proactive-reactive view. A particularly charming and persuasive illustration is James' famous "Romeo and Juliet" example (I, pp. 6-7).

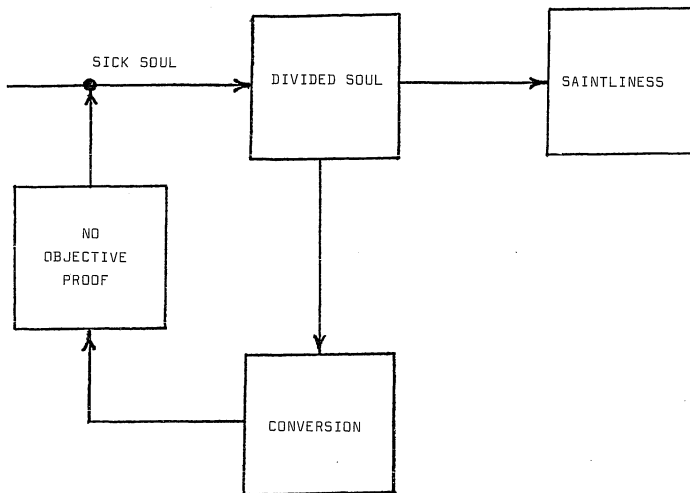


Figure 20. William James' proactive-reactive conception of conversion.

university closet.

Edwards and James would both have agreed with Neisser's proposal that beauty is neither in objects nor in the eye of the beholder, but in the mind.²⁵ It can hardly be denied, they claim, that man reacts to stimulation. His reaction, however, consists in proactively selecting aspects of the stimulation which are relevant to his purposes, and combining the information contained in the stimulation with that in memory to construct his own reality.²⁶ Man in an inherently and basically creative organism. According to Jonathan Edwards, the "gracious discoveries" given in true conversion permit a convert to create a reality which is remarkably congruent with the reality. James would not go this far, and I know of no contemporary psychologist who would take such a metaphysical leap of faith. Our era, like James', is not an age of faith, but rather it is one of skepticism. The rigorous methods which have emerged from such skepticism have yielded a grasp of mental activity which may appear surer than that of Edwards. But then, of course, it should because our reach is so much shorter. Compared to Edwards, modern psychologists must appear as psychological amputees pursuing, as we do, the "art of the soluble."²⁷ Edwards' art

²⁵Cognitive Psychology, p. 3.

²⁶See Figure 9, p. 165, for a pictorial representation of the proactive-reactive principle operating on both inner and external sources of information.

²⁷This well-worn phrase has been popularized by P. B. Medawar in The Art of the Soluble (London, 1967).

was that of the insoluble, of ultimate if unknowable truths; this alone is all that significantly separates the psychology of Jonathan Edwards from that of James and from most modern cognitive psychology.

BIBLIOGRAPHY

Works of Jonathan Edwards Cited in the Text

- "Of Insects." In Sereno E. Dwight (ed.), The Works of President Edwards (10 vols.). New York: Carvill, 1830, I, pp. 23-28.
- "Notes on the Mind." In Harvey G. Townsend (ed.), The Philosophy of Jonathan Edwards from His Private Notebooks. Eugene, Ore.: University of Oregon Press, 1955. (1716-1720).
- "God Glorified in the Work of Redemption, by the Greatness of Man's Dependence Upon Him, in the Whole of It." In Dwight (ed.), Works, VI, pp. 149-162. (1731)
- "A Divine and Supernatural Light . . ." In Dwight (ed.), Works, VI, pp. 171-188. (1734)
- A Faithful Narrative of the Surprizing Work of God. In C. C. Goen (ed.), The Great Awakening. New Haven: Yale University Press, pp. 144-211. (1736)
- "Personal Narrative." In Samuel Hopkins, The Life and Character of the Late Reverend Mr. Jonathan Edwards. Boston, 1765; Reprinted in David Levin (ed.), Jonathan Edwards: A Profile. New York: Hill & Wang, 1969, pp. 1-86. (c. 1737)
- The Distinguishing Marks of a Work of the Spirit of God. In Goen (ed.), Great Awakening, pp. 226-288. (1741)
- "Sinners in the Hands of an Angry God." In Dwight (ed.), Works, VII, pp. 163-177. (1741)
- Some Thoughts Concerning the Present Revival of Religion in New England. In Goen (ed.), Great Awakening, pp. 291-530. (1742)
- A Treatise Concerning the Religious Affections (ed. by John E. Smith). New Haven: Yale University Press, 1959. (1746)
- "Reflection on the Preceding Memoirs." In Jonathan Edwards (ed.), Memoirs of the Rev. David Brainerd (vol. X of Dwight, ed., Works), pp. 414-452. (1749)

"True Grace Distinguished from the Experience of Devils."
In Dwight (ed.), Works, VI, pp. 232-261.

Freedom of the Will (ed. by Paul Ramsey). New Haven: Yale University Press, 1957. (1754)

Original Sin (ed. by Clyde A. Holbrook). New Haven: Yale University Press, 1970. (1758)

A History of the Work of Redemption. In Dwight (ed.), Works, III, pp. 165-436. (1774)

Treatise on Grace (ed. by Paul Helm). London: Clarke, 1971.

References Cited in the Text on Jonathan Edwards
and Puritan Psychology

Allen, Alexander V. G. Jonathan Edwards. Boston: Houghton-Mifflin, 1889.

Battis, Emery. Saints and Sectaries: Anne Hutchinson and the Antinomian Controversy in the Massachusetts Bay Colony. Chapel Hill: University of North Carolina Press, 1962.

Billington, Ray Allen (ed.), The Reinterpretation of Early American History. New York: Norton, 1968.

Blight, James G. "Solomon Stoddard and the Dissolution of the Puritan Faculty Psychology." Journal of the History of the Behavioral Sciences, 1974, 10, 238-250.

Bowne, Bordon P. Metaphysics. New York, 1882.

Burton, Asa. Essays on Some of the First Principles of Metaphysics, Ethics, and Theology (ed. by James G. Blight). Albany, N.Y.: Scholar's Facsimiles & Reprints, 1973. (1824)

Bushman, Richard. "Jonathan Edwards and Puritan Consciousness." Journal for the Scientific Study of Religion, 1966, 5, 383-396.

Bushman, Richard. "Jonathan Edwards as Great Man: Identity, Conversion, and Leadership in the Great Awakening." Soundings: An Interdisciplinary Journal, 1969, 52,

Chauncy, Charles. Seasonable Thoughts on the State of Religion in New England, A Treatise in Five Parts. Boston, 1743.

- Cherry, Conrad. The Theology of Jonathan Edwards. New York: Anchor, 1966.
- Conkin, Paul. Puritans and Pragmatists. New York: Dodd Mead, 1968.
- Davidson, Edward H. "From Locke to Edwards." Journal of the History of Ideas, 1963, 24, 355-372.
- Davidson, Edwards H. Jonathan Edwards: The Narrative of a Puritan Mind. Boston: Houghton-Mifflin, 1966.
- Delattre, Roland. Beauty and Sensibility in the Thought of Jonathan Edwards. New Haven: Yale University Press, 1968.
- Dwight, Sereno E. Life of President Edwards (vol. I of Works, ed. by Dwight). New York: Carvill, 1830.
- Elwood, Douglas J. The Philosophical Theology of Jonathan Edwards. New York: Columbia University Press, 1960.
- Faust, Clarence and Johnson, Thomas (eds.), Jonathan Edwards: Representative Selections. New York: Hill and Wang, 1962.
- Fay, Jay Wharton. American Psychology Before William James. New Brunswick, N.J.: Rutgers University Press, 1939.
- Fearing, Norman S. "Will and Intellect in the New England Mind." William and Mary Quarterly, 1972, 24, 515-558.
- Foster, Frank Hugh. A Genetic History of the New England Theology. Chicago: University of Chicago Press, 1907.
- Fulcher, J. Rodney. "Puritans and the Passions: The Faculty Psychology in American Puritanism." Journal of the History of the Behavioral Sciences, 1973, 2, 123-139.
- Gaustad, Edwin Scott. The Great Awakening in New England. New York: Harper & Row, 1957.
- Gay, Peter. A Loss of Mastery: Puritan Historians in Colonial America. New York: Random House, 1968. (1966)
- Goen, C. C. Revivalism and Separatism in New England, 1740-1800. New Haven: Yale University Press, 1962.

- Goen, C. C. "Editor's Introduction" to Edwards' writings on The Great Awakening. New Haven: Yale University Press, 1972, pp. 1-95.
- Goodwin, Gerald J. "The Myth of 'Arminianism-Calvinism' in Eighteenth Century New England." New England Quarterly, 1968, 41, 213-237.
- Haroutunian, Joseph. Piety Versus Moralism: The Passing of the New England Theology. New York: Harper & Row,
- Heimert, Alan. Religion and the American Mind: From the Great Awakening to the Revolution. Cambridge, Mass.: Harvard University Press, 1966.
- Heimert, Alan & Miller, Perry (eds.), The Great Awakening. New York: Bobbs-Merrill, 1967.
- Helm, Paul. "John Locke and Jonathan Edwards: A Reconsideration." Journal of the History of Philosophy, 1969, 8, 51-61.
- Helm, Paul. "Locke and Edwards." In Helm (ed.), Treatise on Grace and Other Writings. Cambridge, Eng.: Clarke, 1971, pp. 18-20.
- Hempstead, Joshua. The Diary of Joshua Hempstead, of New London, Connecticut. New London, Conn., 1901.
- Holbrook, Clyde. "Editor's Introduction" to Edwards' Original Sin. New Haven: Yale University Press, 1970, pp. 1-101.
- Hopkins, Samuel. The Life and Character of the Late Reverend Mr. Jonathan Edwards. In David Levin (ed.), Jonathan Edwards: A Profile. New York: Hill & Wang, 1969, pp. 1-86. (1765)
- Howard, Leon (ed.), "The Mind" of Jonathan Edwards: A Reconstructed Text. Berkeley, Calif.: University of California Press, 1963.
- James, William. The Varieties of Religious Experience. New York: Collier, 1961. (1902)
- Levin, David (ed.), Jonathan Edwards: A Profile. New York: Hill & Wang, 1969.
- Lovejoy, Arthur O. The Great Chain of Being. Cambridge, Mass.: Harvard University Press, 1936.
- Lowell, Robert. "Jonathan Edwards in Western Massachusetts." In For the Union Dead. New York: Farrar, Straus & Giroux, 1956.

- Lowell, Robert. "After the Surprising Conversions." In David Levin (ed.), Jonathan Edwards: A Profile. New York: Hill & Wang, 1969, pp. 252-253. (1944)
- McGiffert, Michael (ed.), God's Plot: The Paradoxes of Puritan Piety. Amherst, Mass.: University of Massachusetts Press, 1972.
- Miller, Perry. Orthodoxy in Massachusetts. Cambridge, Mass.: Harvard University Press, 1933.
- Miller, Perry. The New England Mind: The Seventeenth Century. Boston: Beacon Press, 1961. (1939)
- Miller, Perry. "Jonathan Edwards on a Sense of the Heart." Harvard Theological Review, 1948, 41, 123-145.
- Miller, Perry. Jonathan Edwards. New York: Sloan, 1949.
- Miller, Perry. Errand into the Wilderness. New York: Harper & Row, 1964. (1956)
- Morgan, Edmund S. The Gentle Puritan: A Life of Ezra Stiles. New Haven: Yale University Press, 1961.
- Morgan, Edmund S. Visible Saints: The History of a Puritan Idea. New York: New York University Press, 1963.
- Morgan, Edmund S. Review of Alan Heimert's Religion and the American Mind. William and Mary Quarterly, 1967, 24, 454-459.
- Murdock, Kenneth B. Increase Mather: Foremost American Puritan. Cambridge, Mass.: Harvard University Press, 1925.
- Parker, Gail Thain. Jonathan Edwards and Melancholy. New England Quarterly, 1968, 41, 193-212.
- Parrington, Vernon L. The Colonial Mind. New York: Harcourt Brace, 1927.
- Persons, Stow. American Minds. New York: Holt, Rinehart & Winston, 1958.
- Ramsey, Paul. "Editor's Introduction" to Edwards' Freedom of the Will. New Haven: Yale University Press, 1957, pp. 1-128.
- Roback, Abraham A. A History of American Psychology. New York: Collier, 1964.
- Schneider, Herbert W. The Puritan Mind. Ann Arbor: University of Michigan Press, 1958. (1930)

- Schneider, Herbert W. A History of American Philosophy (2nd ed.). New York: Columbia University Press, 1962.
- Selement, George (ed.), The Confessions of Thomas Shepard (to be published).
- Shea, Daniel B. Spiritual Autobiography in Early America. Princeton: Princeton University Press, 1968.
- Smith, Claude A. "Jonathan Edwards and 'the Way of Ideas.'" Harvard Theological Review, 1966, 59, 153-173.
- Smith, John E. "Editor's Introduction" to Edwards' Religious Affections. New Haven: Yale University Press, 1959, pp. 1-83.
- Sweet, William Warren. Revivalism in America. New York: Scribner's, 1944.
- Tappan, Henry P. A Review of Edwards's "Inquiry into the Freedom of the Will." New York, 1838.
- Taylor, Nathaniel. Lectures on the Moral Government of God (2 vols.). New York, 1859.
- Tomas, Vincent. "The Modernity of Jonathan Edwards." New England Quarterly, 1952, 25, 60-84.
- Tracy, Joseph. The Great Awakening: A History of the Revival of Religion in the Time of Edwards and Whitefield. Boston: Tappan, 1842.
- Trumbull, Benjamin. A Complete History of Connecticut, Civil and Ecclesiastical, 1663-1764 (2 vols.). New Haven, 1818.
- Trumbull, J. R. History of Northampton (2 vols.). Northampton, Mass., 1898.
- Upham, Thomas C. A Philosophical and Practical Treatise on the Will. Portland, Me., 1834.
- Weisberger, Bernard A. They Gathered at the River. Boston: Little Brown, 1958.
- West, Samuel. Essays on Liberty and Necessity. Boston, 1793.
- Whitefield, George. Whitefield's Journals (ed. by Lain Murray). London: Banner of Truth, 1960.
- Winslow, Ola E. Jonathan Edwards. New York: MacMillan, 1940.

Other References Cited in the Text

- Angell, James R. "The Province of Functional Psychology." Psychological Review, 1907, 14, 61-91.
- Apter, Michael J. The Computer Simulation of Behavior. New York: Harper, 1970.
- Bain, Alexander. The Senses and the Intellect. London, 1855.
- Bartlett, Frederick C. Remembering. Cambridge, Eng.: Cambridge University Press, 1932.
- Bartlett, Frederick, C. Thinking. London: Allen & Unwin, 1958.
- Barzun, Jacques. "History: The Muse and Her Doctors." American Historical Review, 1972, 77, 36-64.
- Benson, Lee. The Concept of Jacksonian Democracy: New York as a Test Case. Princeton: Princeton University Press, 1961.
- Berkhofer, Robert F. A Behavioral Approach to Historical Analysis. New York: MacMillan, 1969.
- Berlin, Isaiah. "History and Theory: The Concept of Scientific History." History and Theory, 1961, 1, 1-31.
- Boring, Edwin G. "The Problem of Originality in Science." American Journal of Psychology, 1927, 39, 70-90.
- Boring, Edwin G. Sensation and Perception in the History of Experimental Psychology. New York: Appleton-Century-Crofts, 1942.
- Boring, Edwin G. A History of Experimental Psychology (2nd ed.). New York: Appleton-Century-Crofts, 1950.
- Boring, Edwin G. "Dual Role of the Zeitgeist in Scientific Creativity." Scientific Monthly, 1955, 80, 101-106.
- Boring, Edwin G., & Boring, Mollie D. "Masters and Pupils Among the American Psychologists." American Journal of Psychology, 1948, 61, 527-534.
- Brett, George Sidney. History of Psychology (3 vols.). London: Allen & Unwin, 1912-1921.
- Brett, George Sidney. Brett's History of Psychology (ed. by R. S. Peters). Cambridge, Mass.: MIT Press, 1962.

- Bronowski, Jacob. Science and Human Values (rev. ed.). New York: Harper & Row, 1965.
- Buckle, Henry T. History of Civilization in England (3 vols.). New York: Longmans Green, 1899.
- Bullitt, William C. & Freud, Sigmund. Thomas Woodrow Wilson, Twenty-Eighth President of the United States: A Psychological Study. Boston: Houghton-Mifflin, 1967.
- Bury, J. B. "The Science of History." In Selected Essays. Cambridge, Eng.: Cambridge University Press, 1930, pp. 3-22.
- Butterfield, Herbert. The Whig Interpretation of History. London: Bell, 1931.
- Carpenter, William B. Principles of Mental Physiology. London, 1874.
- Chomsky, Noam. Review of B. F. Skinner's Verbal Behavior. Language, 1959, 35, 26-58.
- Chomsky, Noam. Aspects of the Theory of Syntax. Cambridge, Mass.: MIT Press, 1965.
- Chomsky, Noam. Language and Mind (rev. ed.). New York: Harcourt, Brace, Jovanovich, 1972.
- Cowley, Malcom. "Remembering Hart Crane." In Brewster Chiselin (ed.), The Creative Process. New York: New American Library, n.d., pp. 145-147. (1952)
- Crovitz, Herbert. Galton's Walk. New York: Harper & Row, 1970.
- Cushman, Robert E. "Faith and Reason." In Roy W. Battenhouse (ed.), A Companion to the Study of St. Augustine. New York: Oxford University Press, 1955.
- DeGroot, A. D. Thought and Choice in Chess. The Hague: Mouton, 1965.
- Dewey, John. Psychology. New York: Harper, 1886.
- Dewey, John. Leibniz's New Essays Concerning the Human Understanding. In Jo Ann Boydston (ed.), The Early Works of John Dewey (5 vols.). Carbondale, Ill.: Southern Illinois University Press, 1969, I, pp. 253-435. (1888)
- Dewey, John. "The Significance of Emotions." In Boydston (ed.), Early Works, IV, pp. 169-188.

- Dewey, John. "The Reflex Arc Concept in Psychology." In Boydston (ed.), Early Works, V, pp. 96-109. (1896)
- Dewey, John. How We Think. Boston: Heath, 1933.
- Dewey, John & Bentley, Arthur F. Knowing and the Known. Boston: Beacon, 1949.
- Dilthey, Wilhelm. "The Understanding of Other Persons and Their Life-Expressions." In Patrick Gardiner (ed.), Theories of History. Glencoe, Ill.: Free Press, 1959, pp. 213-225.
- Donagan, Alan. "Historical Explanation: The Popper-Hempel Theory Reconsidered." History and Theory, 1964, 4, 3-26.
- Duncker, Karl. "On Problem Solving" (trans. by L. S. Lee). Psychological Monographs, 1945, 58, (Whole No. 270).
- Eiseley, Loren. Darwin's Century. New York: Doubleday, 1958.
- Ellis, Albert. Reason and Emotion in Psychotherapy. New York: Lyle Stuart, 1962.
- Erikson, Erik H. Young Man Luther. New York: Norton, 1958.
- Erikson, Erik H. Identity, Youth and Crisis. New York: Norton, 1968.
- Erikson, Erik H. Ghandi's Truth. New York: Norton, 1969.
- Evans, Christopher. Interview in Intellectual Digest, October, 1973, pp. 6-10.
- Fesigl, Herbert & Brodbeck, May (ed.), Readings in the Philosophy of Science. New York: Appleton-Century-Crofts, 1953.
- Fischer, David Hackett. Historians' Fallacies: Toward a Logic of Historical Inquiry. New York: Harper, 1970.
- Friedman, Robert A. "Edwin G. Boring's 'Mature' View of the Science of Science in Relation to a Deterministic, Personal and Intellectual Motif." Journal of the History of the Behavioral Sciences, 1967, 3, 17-26.
- Freud, Sigmund. The Interpretation of Dreams. New York: MacMillan, 1913. (1900)

- Freud, Sigmund. A General Introduction to Psychoanalysis. New York: Simon & Schuster, 1968. (1924)
- Freud, Sigmund. New Introductory Lectures on Psychoanalysis. New York: Norton, 1933.
- Fuchs, A. A. & Kawash, G. "Prescriptive Dimensions for Five Schools of Psychology." Journal of the History of the Behavioral Sciences, 1974, 10, in press.
- Gardiner, Patrick (ed.), Theories of History. Glencoe, Ill.: Free Press, 1959.
- Ghiselin, Brewster (ed.), The Creative Process. New York: New American Library, n.d. (1952)
- Ghiselin, Brewster. "Ultimate Criteria for Two Levels of Creativity." In Frank Barron & Calvin W. Taylor (eds.), Scientific Creativity: Its Recognition and Development. New York: Wiley, 1963, pp. 30-43.
- Gibson, Kenneth. "The Conceptual Basis of American Psychology: A Content Analysis of the Presidential Addresses of the American Psychological Association, 1892-1970." Unpublished Doctoral Dissertation, University of New Hampshire, 1972.
- Ginberg, Herbert & Oppen, Sylvia. Piaget's Theory of Intellectual Development: An Introduction. Englewood Cliffs, N.J.: Prentice-Hall, 1969.
- Guthrie, Edwin R. The Psychology of Learning. New York: Harper, 1952.
- Hall, G. Stanley. Review of John Dewey's Psychology. American Journal of Psychology, 1887, 1, 154-159.
- Hampshire, Stuart (ed.), The Philosophy of Mind. New York: Harper & Row, 1966.
- Harlow, Harry F. "Mice, Monkeys, Men and Motives." Psychological Review, 1953, 60, 23-32.
- Hebb, Donald O. The Organization of Behavior. New York: Wiley, 1949.
- Hebb, Donald O. "The American Revolution." American Psychologist, 1960, 15, 735-745.
- Hebb, Donald O. Textbook of Psychology (3rd ed.). Philadelphia: Saunders, 1972.

- Heidbreder, Edna. Seven Psychologies. New York: Appleton-Century-Crofts, 1933.
- Heidbreder, Edna. "Functionalism." In Mary Henle, Julian Jaynes, & John J. Sullivan (eds.), Historical Conceptions of Psychology. New York: Springer, 1973,
- Hempel, Carl G. & Oppenheim, Paul. "The Logic of Explanation." In Herbert Feigl & May Brodbeck (eds.), Readings in the Philosophy of Science. New York: Appleton-Century-Crofts, 1953, pp. 319-352.
- Hilgard, Ernest R. "The Domain of Hypnosis: With Some Comments on Alternative Paradigms." American Psychologist, 1973, 28, 972-982.
- Hitt, W. D. "Two Models of Man." American Psychologist, 1969, 24, 651-659.
- Holt, Robert R. "Imagery: The Return of the Ostracized." American Psychologist, 1964, 19, 254-264.
- Housman, A. E. The Name and Nature of Poetry. New York: MacMillan, 1933.
- Hull, Clark. Principles of Behavior. New York: Appleton-Century-Crofts, 1943.
- Hutcheson, Thomas. An Inquiry into the Original of Our Ideas of Beauty and Virtue. London, 1625.
- James, William. Principles of Psychology (2 vols.). New York: Holt, 1890.
- Jaynes, Julian. "Edwin Garrigues Boring, 1886-1968." Journal of the History of the Behavioral Sciences, 1969, 5, 99-112.
- Keller, Fred. The Definition of Psychology (2nd ed.). New York: Appleton-Century-Crofts, 1973.
- Kelly, George A. The Psychology of Personal Constructs (2 vols.). New York: Norton, 1955.
- Kimble, Gregory A. & Perlmutter, Lawrence C. "The Problem of Volition." Psychological Review, 1970, 77, 361-384.
- Klwin, George S. Perception, Motives and Personality. New York: Random House, 1970.
- Köhler, Wolfgang. The Mentality of Apes. New York: Harcourt, 1925.

- Krippner, Stanley. "The Psychedelic State, the Hypnotic Trance and the Creative Act." In Charles T. Tart (ed.), Altered States of Consciousness. New York: Wiley, 1969, pp. 271-290.
- Kris, Ernst. Psychoanalytic Explorations in Art. New York: International Universities Press, 1952.
- Kuhn, Thomas S. The Copernican Revolution: Planetary Astronomy in the Development of Western Thought. Cambridge, Mass.: Harvard University Press, 1957.
- Kuhn, Thomas S. The Structure of Scientific Revolutions (2nd ed.). Chicago: University of Chicago Press, 1970.
- Lewis, Clarence Irving. Analysis of Knowledge and Valuation. LaSalle, Ill.: Open Court, 1946.
- Lifton, Robert J. Death in Life. New York: Random House, 1967.
- Lifton, Robert J. "On Psychohistory." In Herbert Bass (ed.), The State of American History. Chicago: Quadrangle, 1970, pp. 276-297.
- Lifton, Robert J. Home from the War. New York: Simon & Schuster, 1973.
- Lindsay, Peter & Norman, Donald A. Human Information Processing. New York: Academic, 1972.
- Locke, John. An Essay Concerning Human Understanding (2 vols., ed. By A. C. Fraser). New York: Dover, 1959. (1690)
- Loehlin, J. C. Computer Models of Personality. New York: Random House, 1968.
- Lowry, Richard. The Evolution of Psychological Theory. Chicago: Aldine, 1971.
- MacCorquodale, Kenneth & Meehl, Paul. "On a Distinction between Hypothetical Constructs and Intervening Variables." Psychological Review, 1948, 55, 95-107.
- Maddi, Salvatore R. Personality Theories: A Comparative Analysis (2nd ed.). Homewood, Ill.: Dorsey, 1972.
- Maier, N. R. F. "Reasoning in Humans. I. On Direction." Journal of Comparative Psychology, 1930, 10, 115-143.
- Manuel, Frank. Portrait of Isaac Newton. Cambridge, Mass.: Harvard University Press, 1968.

- Manuel, Frank. "The Use and Abuse of Psychology in History." Daedalus, Winter, 1971, pp. 187-213.
- Maslow, Abraham H. The Psychology of Science: A Reconnaissance. New York: Harper & Row, 1966.
- Maslow, Abraham H. Toward a Psychology of Being (2nd ed.). New York: Van Nostrand, 1968.
- Mastricht, Peter von. A Treatise on Regeneration. Extracted and translated from the Theologia Theoretico-Practica. New Haven, 1770.
- May, Rollo. "Creativity and Encounter." In H. M. Ruitenbeek (ed.), The Creative Imagination. Chicago: Quadrangle, 1965, pp. 283-291.
- May, Rollo. "William James Humanism and the Problem of Will." In Robert B. MacLeod (ed.), William James: Unfinished Business. Washington, D.C.: APA, 1969, pp. 73-91.
- Mazlish, Bruce (ed.), Psychoanalysis and History (2nd ed.). New York: Grosset, 1971.
- Medawar, P. B. The Art of the Soluble. London: Methuen, 1967.
- Miller, George A. "Decision Units in the Perception of Speech." IRE Transactions on Information Theory, 1962, 8, 81-83.
- Miller, George A., Galanter, Eugene & Pribram, Karl. Plans and the Structure of Behavior. New York: Holt, 1960.
- Mueller, Ronald H. "The American Era of James Mark Baldwin, 1893-1903." Unpublished Doctoral Dissertation, University of New Hampshire, 1974.
- Murphy, Gardner. Psychological Thought from Pythagoras to Freud. New York: Harcourt, 1968.
- Murphy, Gardner & Murphy, Lois B. (eds.), Asian Psychology. New York: Basic Books, 1968.
- Murphy, Gardner & Kovach, Joseph K. Historical Introduction to Modern Psychology (3rd ed.). New York: Harcourt, Brace, Jovanovich, 1972.
- Neisser, Ulric. "The Imitation of Man by Machine." Science, 1963, 139, 193-197.
- Neisser, Ulric. "The Multiplicity of Thought." British Journal of Psychology, 1963, 54, 1-14.

- Neisser, Ulric. Cognitive Psychology. New York: Appleton-Century-Crofts, 1967.
- Newall, Allen, Shaw, J. C., & Simon, Herbert. "Elements of a Theory of Human Problem Solving." Psychological Review, 1958, 65, 151-166.
- Orne, Martin. "The Nature of Hypnosis: Artifact or Essence." Journal of Abnormal and Social Psychology, 1959, 58, 277-299.
- Ornstein, Robert. The Psychology of Consciousness. San Francisco: Freeman, 1972.
- Perry, Ralph Barton. The Thought and Character of William James (2 vols.). Boston: Little-Brown, 1935.
- Pervin, Lawrence A. Personality: Theory, Assessment and Research. New York: Wiley, 1970.
- Peters, R. S. "Theory, Policy, and Technology." In R. S. Peters (ed.), Brett's History of Psychology. Cambridge, Mass.: MIT Press, 1962, pp. 25-36.
- Piaget, Jean. Judgment and Reasoning in the Child (trans. by M. Cook). New York: Routledge & Kegan Paul, 1928.
- Piaget, Jean. The Construction of Reality in the Child. New York: Basic Books, 1954. (1936)
- Polanyi, Michael. Personal Knowledge: Toward a Post-Critical Philosophy. Chicago: University of Chicago Press,
- Polanyi, Michael. The Study of Man. Chicago: University of Chicago Press, 1959.
- Polanyi, Michael. The Tacit Dimension. New York: Doubleday, 1966.
- Popper, Karl R. The Open Society and Its Enemies (2 vols.). London: Routledge & Kegan Paul, 1945.
- Popper, Karl R. The Logic of Scientific Discovery. London: Hutchinson, 1959.
- Popper, Karl R. The Poverty of Historicism (2nd ed.). London: Routledge & Kegan Paul, 1960.
- Przywara, Erich (ed.), An Augustine Synthesis. New York: Harper, 1958.

- Rapaport, David (ed.), Organization and Pathology of Thought. New York: Columbia University Press, 1951.
- Reitman, Walter R. Cognition and Thought: An Information Processing Approach. New York: Wiley, 1965.
- Rogers, Carl R. On Becoming a Person. Boston: Houghton-Mifflin, 1961.
- Rosenthal, Robert. Experimenter Effects in Behavioral Research. New York: Appleton-Century-Crofts, 1966.
- Ross, Barbara C. "Psychological Thought within the Context of the Scientific Revolution, 1665-1700." Unpublished Doctoral Dissertation, University of New Hampshire, 1970.
- Ross, Dorothy. "The 'Zeitgeist' and American Psychology." Journal of the History of the Behavioral Sciences, 1969, 5, 256-262.
- Ruckmick, C. A. "The Use of the Term Function in English Textbooks of Psychology." American Journal of Psychology, 1913, 24, 99-123.
- Schachtel, Ernest G. Metamorphosis. New York: Basic Books, 1959.
- Schultz, Duane P. A History of Modern Psychology. New York: Academic, 1969.
- Selfridge, Oliver. "Pandemonium: A Paradigm for Learning." In The Mechanisation of Thought Processes. London: HM Stationery Office, 1959.
- Selfridge, Oliver & Neisser, Ulric. "Pattern Recognition by Machine." Scientific American, 1960, 203, 60-68.
- Sexton, Virginia & Misak, Hendryk. History of Psychology: An Overview. New York: Grune & Stratton, 1966.
- Shapiro, Karl. "W. B. Yeats: Trial by Culture." In In Defense of Ignorance. New York: Random House, 1960, pp. 87-113.
- Shor, Ronald E. "Hypnosis and the Concept of the Generalized Reality Orientation." American Journal of Psychotherapy, 1959, 13, 582-602.
- Shor, Ronald E. "Three Dimensions of Hypnotic Depth." International Journal of Clinical and Experimental Hypnosis, 1962, 10, 23-38.

- Simon, Herbert. "Motivational and Emotional Controls of Cognition." Psychological Review, 1967, 74, 29-39.
- Skinner, B. F. Walden II. New York: MacMillan, 1948.
- Skinner, B. F. Verbal Behavior. New York: Appleton-Century-Crofts, 1958.
- Skinner, B. F. Beyond Freedom and Dignity. New York: Knopf, 1971.
- Sluckin, W. Minds and Machines (rev. ed.). Baltimore: Penguin, 1960.
- Smith, John. Select Discourses. London, 1673.
- Starbuck, Edwin D. The Psychology of Religion. London: Scott, 1901.
- Stocking, George W. "On the Limits of 'Presentism' and 'Historicism' in the Historiography of the Behavioral Sciences." Journal of the History of the Behavioral Sciences, 1965, 1, 211-217.
- Stodtland, Ezra & Canon, Lance. Social Psychology: A Cognitive Approach. Philadelphia: Saunders, 1972.
- Tart, Charles T. (ed.). Altered States of Consciousness. New York: Wiley, 1969.
- Tilly, Charles. The Vendée. Cambridge, Mass.: Harvard University Press, 1964.
- Titchener, Edward Bradford. "The Postulates of a Structural Psychology." Philosophical Review, 1898, 7, 449-465.
- Tolman, Edward C. Purposive Behavior in Animals and Men. New York: Century, 1932.
- Tolman, Edward C. "Cognitive Maps in Rats and Men." Psychological Review, 1948, 55, 189-208.
- Trevelyan, G. M. "Clio, a Muse." In Clio, a Muse and Other Essays, Literary and Pedestrian. London: Longmans Green, 1913, pp. 140-176.
- Uhr, Leonard (ed.). Pattern Recognition: Theory, Experiment, Computer Simulations, and Dynamic Models of Form Perception and Discovery. New York: Wiley, 1966.
- Wallas, Graham. The Art of Thought. London: Cape, 1926.

- Walsh, W. H. "The Limits of Scientific History." In James Hogan (ed.), Historical Studies III. London, 1961, pp. 45-57.
- Warren, Howard C. A History of the Association Psychology. New York: Scribners, 1921.
- Watson, James D. The Double Helix. New York: Atheneum, 1968.
- Watson, John B. "Psychology as the Behaviorist Views It." Psychological Review, 1913, 20, 158-177.
- Watson, John B. Behaviorism. New York: Norton, 1930.
- Watson, John B. "Autobiography." In Carl Murchison (ed.), A History of Psychology in Autobiography. Worcester, Mass.: Clark University Press, 1936, pp. 271-281.
- Watson, Robert I. "Psychology: A Prescriptive Science." American Psychologist, 1967, 22, 435-443.
- Watson, Robert I. "Prescriptions as Operative in the History of Psychology." Journal of the History of the Behavioral Sciences, 1971, 7, 311-322.
- Watson, Robert I. "A Prescriptive Analysis of Descartes' Psychological Views." Journal of the History of the Behavioral Sciences, 1971, 7, 223-248.
- Watson, Robert I. The Great Psychologists: Aristotle to Freud (3rd ed.). Philadelphia: Lippincott, 1972.
- Watson, Robert I. "Prescriptive Theory and the Social Sciences." Invited Address delivered at the annual meeting of the American Psychological Association, New Orleans, August, 1974.
- Wertheimer, Max. Productive Thinking (Michael Wertheimer, ed.). New York: Harper, 1959.
- Wertheimer, Michael. A Brief History of Psychology. New York: Holt, Rinehart & Winston, 1970.
- Wertheimer, Michael. Fundamental Issues in Psychology. New York: Holt, Rinehart & Winston, 1972.
- White, Robert W. "Motivation Reconsidered: The Concept of Competence." Psychological Review, 1959, 66, 297-333.
- Whorf, Benjamin Lee. Language, Thought and Reality. Cambridge, Mass.: MIT Press, 1956.

- Wiener, Norbert. Cybernetics. New York: Wiley, 1948.
- Wild, Cynthia. "Creativity and Adaptive Regression."
Journal of Personality and Social Psychology, 1965,
2, 161-169.
- Windelband, W. Geschichte und Naturwissenschaft. Strassburg,
1894.
- Winograd, Terry. "Understanding Natural Language . . ."
Cognitive Psychology, 1972, 3, 1-191.
- Wolpe, Joseph. The Practice of Behavior Therapy. New York:
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